DIGBOI COLLEGE

ITAVATA, P.O.: DIGBOI-786171(ASSAM)

Third Cycle NAAC Accreditation

Criteria-1

Curricular Aspects

1.1 Curricular Planning and Implementation

Submitted to

THE NATIONAL ASSESSMENT
AND ACCREDITATION COUNCIL

1.1.1

2. COURSE & SYLLABUS DISTRIBUTION

ESTD 1965

ডিগবৈ মহাবিদ্যালয়

DIGBOI COLLEGE

Session
2016-17
2017-18
2018-19
2019-20
2020-21

COURSE DISTRIBUTION

for the

ACADEMIC SESSION: 2016-17

ESTD 1965

ডিগবৈ মহাবিদ্যালয়

DIGBOI COLLEGE

DEPARTMENT OF ASSAMESE

SYLLAUS DISTREBUTION,2016-2017(ODD SEMESTER)

1st ,3rd and 5th semester(from July,2016 to Dec,2016)

1st semester

Paper code	Course title	unit	Name of the Teacher
Major I ASMM 101	History of Assamese Literature (From the Begening to Post Sankardeva Period)	01	Simanta Bordoloi
		02	Deepa Sarma Borthakur
		03	Purnananda Saikia
		04	Achyut Saikia
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
MIL I ASM 101	History of Assamese Literatur and Study of Assamese Culture	01	Simanta Bordoloi
		02	Achyut Saikia
		03	Achyut Saikia
		04	Dr. Mrinal kr. Gogoi
		05	Purnananda Saikia
		06	Deepa Sarma Borthakur

3rd semester

Paper code	Course title	unit	Name of the Teacher
Major III ASMM 301	Introduction to Linguistics	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Deepa Sarma Borthakur

Paper code	Course title	unit	Name of the Teacher
Major IV ASMM 302	Selection from Assamese Poetry	01	Achyut Saikia
		02	Achyut Saikia
		03	Purnananda Saikia
		04	Purnananda Saikia
		05	Purnananda Saikia

Paper code	Course title	unit	Name of the Teacher
MIL I COM. ASMC 301	Modern Indian Language(Assamese	01	Purnananda Saikia
		02	Deepa Sarma Borthakur & Simanta Bordoloi
		03	Achyut Saikia
		04	Dr. Mrinal kr. Gogoi & Simanta Bordoloi

5th Semester.

Paper code	Course title	unit	Name of the Teacher
Major VII ASMM 501	Literary Theory and Creticism	01	Dr. Mrinal kr. Gogoi
		02	Dr. Mrinal kr. Gogoi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
Major VIII ASMM 502	Assamese Drama	01	Simanta Bordoloi
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Deepa Sarma Borthakur
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
Major IX ASMM 503	Cultural Studies	01	Purnananda Saikia
		02	Purnananda Saikia
		03	Purnananda Saikia
		04	Purnananda Saikia
		05	Purnananda Saikia

Paper code	Course title	unit	Name of the Teacher
Major X ASMM 504	Comparative Indian Literature	01	Achyut Saikia
		02	Achyut Saikia
		03	Achyut Saikia
		04	Achyut Saikia
		05	Achyut Saikia

DEPARTMENT OF ASSAMESE

SYLLAUS DISTREBUTION,2016-2017(Even SEMESTER)

2nd ,4th and 6th semester(from Jan,2017 to June,2017)

2nd semester

Paper code	Course title	unit	Name of the Teacher
Major II ASMM 201	History of Assamese Literature (From the Arunodoi to Post war Period)	01	Achyut Saikia
		02	Simanta Bordoloi
		03	Purnananda Saikia
		04	Deepa Sarma Borthakur
		05	Dr. Mrinal Kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
MIL II ASM 201	Practices of Assamese Language	01	Dr. Mrinal kr. Gogoi & Achyut Saikia
		02	Achyut Saikia
		03	Purnananda Saikia
		04	Dr. Mrinal kr. Gogoi
		05	Deepa Sarma Borthakur & Simanta Bordoloi

4th semester

Paper code	Course title	unit	Name of the Teacher
Major V ASMM 401	Assamese Prose Literature	01	Achyut Saikia
		02	Purnananda Saikia
		03	Simanta Bordoloi
		04	Simanta Bordoloi
		05	Achyut Saikia

Paper code	Course title	unit	Name of the Teacher
Major VI ASMM 402	Language and Script of Assam	01	Deepa Sarma Borthakur
		02	Dr. Mrinal kr. Gogoi
		03	Deepa Sarma Borthakur
		04	Deepa Sarma Borthakur
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
MIL III NON MAJOR ASM 401	Selection from Assamese Literature	01	Purnananda Saikia
		02	Deepa Sarma Borthakur
		03	Simanta Bordoloi
		04	Achyut Saikia
		05	Dr. Mrinal kr. Gogoi

6th semester

Paper code	Course title	unit	Name of the Teacher
Major XI ASMM 601	Various aspects of Studying Language and Literature	01	Purnananda Saikia
		02	Simanta Bordoloi
		03	Simanta Bordoloi
		04	Purnananda Saikia
		05	Achyut Saikia

Paper code Major XII ASMM 602	Course title	unit	Name of the Teacher
	Indo Aryan Languages and Assamese Language	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Simanta Bordoloi
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
Major XIII ASMM 603	Linguistic Study of Assamese Language	01	Dr. Mrinal kr. Gogoi
		02	Dr. Mrinal kr. Gogoi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
Major XIV ASMM 604	Introduction to World Literature	01	Achyut Saikia
		02	Purnananda Saikia
		03	Achyut Saikia
		04	Achyut Saikia
		05	Purnananda Saikia & Achyut Saikia

DEPARTMENT OF BENGALI

Course Distribution

Digboi College, Digboi.

Session: 2016-2017

Faculty Name	semester	Paper to Teach
Dipesh Mandal	1st SEM	UNIT- 1&3
	2nd SEM	UNIT-2&4
	3rd SEM	UNIT-1,3&5
	4th SEM	UNIT- 1&3
Dr. Kanai Das	1ST SEM	UNIT- 2&4
	2nd SEM	UNIT- 1&3
	3rd SEM	UNIT- 2&4
	4th SEM	UNIT- 2&4

(Dipesh Mandal)

Signature of HoD

Department of Bengali.

DEPARTMENT OF BOTANY

COURSE DISTRIBUTION,SESSION- 2016-17

SEMESTER,CORE

urse content	faculty
gae-A,a,b,c	Dr T.C.Dutta
chen	Mrs. J.S.Phukan
ungi and Plant pathology	Mr D.M. Das
Algae-c,d and Bacteria and Virus	Mrs. Dr. D. Das

1ST SEMESTER, MAJOR

Course content	Faculty
Algae	Dr.T.C.Dutta
Lichen	Mrs. J.S Phukan
Fungi	Mr. D.M.Das
Algae-	Mrs.Dr. D.Das

3RD SEMESTER CORE

Course content	Faculty
Developmental Biology	Dr.T.C.Dutta
Reproduction	Mrs. J.S.Phukan
Morphology	Mr.D.M.Das
Taxonomy	Mrs.Dr.D.Das

3RD SEMESTER MAJOR,PAPER-301

COURSE CONTENT	Faculty
Gymnosperms	Mrs.J.S.Phukan
Palaeo Botany	Mrs.Dr.D.Das
Pteridophytes	Mrs.Dr.D.Das

3RD SEMESTER,MAJOR,PAPER-302

Course content	Faculty
Biotechnology	DrT.C.Dutta
Microbiology	Mr.D.M.Das

5TH SEMESTER, MAJOR ,PAPER-503

Course content	Faculty
Biosatistics,Genetics and Plant Breeding	Dr. T.C.Dutta

5TH SEMESTER,MAJOR,PAPER-501

Course content	Faculty
Development and Reproduction in Angiosperms	Mrs.J.SPhukan

5TH SEMESTER,MAJOR,PAPER -507

Course content	Faculty
Ecology,Phytogeography and Evolution	Mr.D.M.Das

TH SEMESTER,MAJOR,PAPER-505

Course content	Faculty
Functional and Chemical Biology	Mrs.Dr.D.Das

HOD,Department of Botany

COURSE DISTRIBUTION- EVEN SEMESTER (JAN-MAY) 2017

NAME	SEM	TOPIC	SEM	TOPIC	HS I	HS II
JYOTSNA S PHUKAN	II(M) IV(M) VI(M)	- Cell Biology(unit 2) 601 & 602(entire paper) & All the related practical	II(G) IV(G) VI(G)	Gymnosperm(unit I & II) Economic Botany (unit 1 - a to g) Plant Geography (unit I) & All the related practical	Chapter 8	-
DR. TILAK DUTTA	II(M) IV(M) VI(M)	Bryophyte (unit 1,2,3) Cell Biology (unit 1,3,4,5) 603(entire paper) & All the related practical	II(G) IV(G) VI(G)	Bryophyte (unit I) - Plant Ecology(unit 4); Plant Geography(unit 2) & All the related practical	-	Chapter 1,2,10
DULUMONI DAS	II(M) IV(M) VI(M)	Plant Pathology (unit 1-4) Modern Laboratory Technique (unit – 1) 606 & 607(Entire paper) & All the related practical	II(G) IV(G) VI(G)	- Plant Physiology(unit 1-6) Plant Ecology(unit 1-6) & All the related practical	Chapter 11 -15	Chapter 7,13,16 & Practical
Dr. Dimpi Das	II(M) IVM) VI(M)	- 401 (Entire Paper) 604(Entire Paper) & All the related practical	II(G) IV(G) VI(G)	Pteridophyte (unit 1) Economic Botany (unit 1 - a to g) Biochemistry (unit 1 & 2) & All the related practical	Chapter 1-3; 5,6 & Practical	Chapter 9,11,12

2/1/17

Jyotsna Sarmah Phukan
HOD Botany Department

DEPARTMENT OF CHEMISTRY

Session: June 2016-Dec 2016

Semester I (Non CBCS)	Semester III (Non CBCS)	Semester V (Non CBCS)
Paper MM-101-Physical+Inorganic+Organic	**Paper MM-301 (Inorganic Chemistry)**	**Paper MM-501 (Physical Chemistry)**
Section I- Physical Chemistry	Unit 1: NH	Unit I: NJK
	Unit 2: GK	Unit II: NJK
Unit I: NJK	Unit 3: NH	Unit III: NJK
Unit II: JD		Unit IV: JD
Unit III: JD		Unit V: JD
Section II-Inorganic Chemistry	**Paper MM-303 (Organic Chemistry)**	**Paper MM-503 (Inorganic Chemistry)**
Unit I: NH	Unit I:BS	Unit I: NH
Unit II: GK	Unit II:BS	Unit II: NH
	Unit III:BS	Unit III: GK
Section III-Organic Chemistry	Unit IV:BS	Unit IV: GK
	Unit V: BS	
Unit I: BS		
Unit II: BS		**Paper MM-505 (Organic Chemistry)**
Paper NM-101 **Inorganic + Physical+ Organic**	**Paper: NM-301 (Organic Chemistry)**	Unit I: BS
		Unit II: BS
Section I-Inorganic Chemistry		Unit III: BS
	Unit I: BS	Unit IV: BS
Unit I: NH	Unit II: BS	Unit V: BS
Unit II: GK	Unit III: NJK	
	Unit IV: NJK	**Paper MM-507(Symmetry and Quantum**
Section II- Physical Chemistry	Unit V: BS	**Chemistry)**
Unit III: NJK		Unit I: NH
Unit IV: JD		Unit II: JD
Unit V: JD		Unit III: JD
Section III- Organic Chemistry		**Paper: NM 501**
		(Inorganic Chemistry + Physical Chemistry)
Unit VI: BS		**Physical Chemistry**
Unit VII: BS		Unit I: NH
Unit VIII: BS		Unit II: NH
		Unit III: NH
		Second half
		Unit I: JD
		Unit II: JD
		Unit III: JD
		Unit IV: NJK
		Unit IV: NJK
		Unit VI: NJK

GK: Mr. Golap Kalita, JD: Mrs Jonali Dutta, NH: Mrs. Neelakshi Hazarika, NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia

DEPARTMENT OF CHEMISTRY

Session: Jan 2017-May 2017

Semester II (Non CBCS)	Semester IV (Non CBCS)	Semester VI (Non CBCS)
MM-201 Physical+Inorganic+Organic	**Paper MM-401 (Physical Chemistry)**	**Paper MM-601 (Physical Chemistry)**
Section I- Physical Chemistry	Unit 1: JD	Unit I: JD
	Unit 2: NJK	Unit II: JD
Unit I: NJK	Unit 3: JD+NJK	Unit III: NJK
Unit II: JD		Unit IV: NJK
		Unit V: JD
Section II-Inorganic Chemistry		
	Paper MM-403 (Organic Chemistry)	**Paper MM-603 (Inorganic Chemistry)**
Unit I: NH		
Unit II: NH	Unit I: BS	Unit I: NH
	Unit II: BS	Unit II: NH
Section III-Organic Chemistry	Unit III: BS	Unit III: NH
	Unit IV: BS	Unit IV: NH
Unit I: BS	Unit V: BS	
Unit II: BS		**Paper MM-605 (Organic Chemistry)**
Unit II: BS		
		Unit I: BS
NM-201 Inorganic Chemistry	**Paper NM-405 (Physical Chemistry)**	Unit II:BS
		Unit III:BS
Unit I: NH	Unit I: NJK	Unit IV:BS
Unit II: NH	Unit II: JD	Unit V:BS
Unit III: NH	Unit III: NJK	Unit VI:BS
Unit IV: NH	Unit IV: KU	
		Paper MM-607(Molecular Spectroscopy)
		Unit I: NH
		Unit II: NH
		Unit III: NH
		Unit IV: JD
		Unit IV: JD
		Paper NM-601 (Organic Chemistry)
		Unit I: BS
		Unit II: BS
		Unit III:BS
		Unit IV: BS
		Unit V: NJK
		Unit VI: NJK

JD: Mrs. Jonali Dutta, NH: Mrs. Neelakshi Hazarika, NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia,

Department of Commerce

Subject-wise Syllabus Distribution for the Academic session July-Dec, 2016

Stream/ Subjects / Name Of The Faculty	SUBJECTS																Remarks
	HS 1ST YEAR		HS 2ND YEAR		B.COM 1 SEM		B.COM 3RD SEM					B.COM 5TH SEM					
	ACCY	BST	ACCY	BST	FA	BL	ITLP	MPA	HRM	BSTAT	ECOM	MA	ENTREP	DTAX	SM	RM	
PRADIP CH. DAS	Unit-IV,V,VII,VIII		A/B/Unit-I,V,VI		Unit-IV		Unit-I,II,V							Unit-I,II,III,IV			
DR. DEBORSHEE GOGOI		Unit III, VI, VII, VIII,XI, XII		Unit I, II, III, IX, X, XI		Unit IV, V		Unit I, V	Unit II, IV, V							Unit I, II, III, IV	
SAMPREETI BORUAH	Unit-VI,IX,X		B/Unit-I,II,III,IV		Unit-I, III		Unit-III,IV			Unit-II, IV		Unit-I,II,III	Unit-III,IV				
Dr. Bikash K. Baruah	Unit-I,II,III		A/Unit-II,III,IV, V		Unit-II, V					Unit-I, V	Unit-II (half), III, V	Unit-IV	Unit-I,II				
Bhababhuti S Boruah		IV,V, IX, X		VI, VII, VIII, XII				IV	III	III					Unit I, II, III,		
Cheni Chandra Baruah		Unit I,II,		Unit IV, V,		Unit I,II,III		Unit II, III,	Unit I,	Unit-VI,	Unit I, II(half), I V				IV		

Department of Commerce

Subject-wise Syllabus Distribution for the Academic session Jan-June, 2017

Stream/ Subjects / Name Of The Faculty	SUBJECTS																		
	HS 1ST YEAR		HS 2ND YEAR		B.COM 2nd SEM		B.COM 4th SEM					B.COM 6th SEM							
	ACCY	BST	ACCY	BST	CA	CL	CA	AUD	SMKT	SAPM	CB	FSA	DT-II	RM	AM	SBM	IM	BAPP
PRADIP CH. DAS	Unit-IV,V,VII, VIII		A/B/Unit-I,V,VI		Unit-IV		Unit-I,II,V			Unit-V		Unit-III		Unit-I,II,III,IV				
CHENI CHANDRA BORUAH		Unit III, VI, VII,		Unit I, II, III, IX, X, XI		Unit IV, V		Unit I, V	Unit II, IV, V		Unit II, IV, V					Unit I, II	**I,II**	**I**
BHABABHUTI S BARUAH		VIII, XI, XII		VIII, XII												III		**II**
SAMPREETI BORUAH	Unit-VI,IX,X		B/Unit-I,II,III,IV		Unit-I, III		Unit-III,IV			Unit-II, IV		Unit-I,II	Unit-III,IV					
RAMJANUL HAQUE	Unit-I,II,III		A/Unit-II,III,IV, V		Unit-II, V					Unit-I, III		Unit-IV	Unit-I,II					
D GOGOI		Unit I,II, IV,V, IX, X		Unit IV, V, VI, VII,		Unit I,II,III		Unit II, III, IV	Unit I, III		Unit I, III				I, II, III, IV	IV	**III, IV**	**III, IV**

DEPARTMENT OF EDUCATION

COURSE DISTRIBUTION -2016-17

Name of the Teacher- POBAN GOGOI
PRADIP DUTTA
SNEHA GOGOI

Course –General
Semester-I
Name of the paper- foundation of Education-101
Marks Assigned- 16 per unit

Units Assigned	**Name of the Teacher**	Remarks
V,III	**PRADIP DUTTA**	
II&III	**POBAN GOGOI**	
IV	**SNEHA GOGOI**	

Course –Major
Semester-I
Name of the paper- philosophical foundation of Education-101

Units Assigned	**Name of the Teacher**	Remarks
V,III	**POBAN GOGOI**	
II&III	**PRADIP DUTTA**	
IV	**SNEHA GOGOI**	

Class/Semester-II-general Name of the paper- Educational psychology -201
Marks Assigned- 16

Units Assigned	**Name of the Teacher**	Remarks
II	**PRADIP DUTTA**	
I, IV	**POBAN GOGOI**	
V	**SNEHA GOGOI**	

Class/Semester-II-Major
Name of the paper- sociological foundation of education-202
Marks Assigned- 16

Units Assigned	**Name of the Teacher**	Remarks
V	**POBAN GOGOI**	
III	**PRADIP DUTTA**	
, IV II	**SNEHA GOGOI**	

DEPARTMENT OF ELECTRONICS
DIGBOI COLLEGE
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Ref: Date: 1/01/2017

Course Distribution
Session: Odd Semester 2016-17

Faculty Name	Semester	Paper to Teach
Dr. Jayanta Handique	1st	101M (All Unit) , 101G (unit- 2, 6)
	3rd	301G (Unit- 1,4)
	5th	501M (All Unit), 501G (Unit-4), RMEG501(Unit-1, 2, 4)
Mr. Satish Gupta	1st	101G(Unit-3,5)
	3rd	302M (Unit- All), 301G (Unit- 5, 6)
	5th	503M(Unit- All), 501G (Unit-3, 5), RMEG501(Unit-3,5)
Mr. Pradeep K. Khound	1st	101G (unit- 1,4)
	3rd	301M (Unit- All), 301G (Unit- 2, 3)
	5th	502M(Unit- All), 501G (Unit-1, 2)

Course Distribution
Session: Even Semester 2016-17

Faculty Name	Semester	Paper to Teach
Dr. Jayanta Handique	2nd	201G (unit- 2)
	4th	401M (Unit- All), 401G (Unit-3)
	6th	603M (All Unit), 601G (Unit-1,2), RMEG601(Unit-3, 4)
Mr. Satish Gupta	2nd	201G(Unit-4)
	4th	402M (Unit- All), 401G (Unit- 4, 6)
	6th	602M(Unit- All), 601G (Unit-3, 4), RMEG601(Unit-1,2)
Mr. Pradeep K. Khound	2nd	201M (Unit- All), 201G (Unit-1,3)
	4th	401G (Unit- 1, 2, 5)
	6th	601M(Unit- All)

Syllabus Distribution

Dept. of English

Session: Jun-Dec'16(Odd Semester)

SEM I

Arts (A: B)/Sc: Gen. Eng.

UNIT	TOPIC	Faculty
I	Comprehension	BRP:GB/BRP
	Précis	
II	Letter Writing	JD:PB/SD
III	Note-making/Writing memos/Short notes	JD:PB/SD
IV	Paragraph writing	SD:CC/CC
	Report Writing	SD:CC/CC
V	Transcoding information from Chart, Graph, Visuals etc.	BRP:GB/BRP

Major I: History of English Society and Culture

UNIT	TOPIC	
I	The Anglo - Saxon Period	BRP
II	The Age of Chaucer	BRP
III	The Renaissance	JD
IV	The Puritan Legacy and the Commonwealth	JD
V	The Restoration	PB
	Overview..	PB

Commerce: Business Communication

UNIT	TOPIC	
I	Introducing Business Communications....	GB
II	Corporate Communication....	GB
III	Practice in Business Communication...	SD
IV	Business Letters and memo formats	PB

Arts: Alt. Eng

UNIT	TOPIC	
I	Shakespeare: Sonnet 30	PB
	Milton: On his Blindness	PB
	Wordsworth: The Solitary Reaper	PB
II	Hopkins: Pied Beauty	PB
	Yeats: Easter 1916	SD
	Ted Hughes : Hawk Roosting	SD
III	Whitman: Song of Myself	SD
	Pound : The River Merchant's Wife: A Letter	SD
	Langston Hughes: Necessity, I too Sing America	JD
IV	Ramanujan: The Breaded Fish	JD
	Kamala Das: An Introduction	JD
	Vikram Seth: Frogs and Nightingales	JD

SEM III

Arts: Gen. Eng

UNIT	TOPIC	
I	Wordsworth: We are Seven	PB
	Frost: Mending Wall	PB
	Eliot: To the Indians Who Died in Africa	PB
	Ezekiel: A Very Indian Poem in English	PB

II	Langston Hughes: Ballad of the Landlord	SD
	Seamus Heaney: The Wife's Tale	SD
	Grace Nichols: Wherever I Hang	SD
	Derek Walcott: The River	SD
III	Anton Chekov: A Marriage Proposal	BRP

Arts: Communication Skills

UNIT	TOPIC	
I/IV	Essay Writing/Grammar in Communication	GB
II/III	Conversational English/Common Mistakes in English	JD
III/IV	Common Mistakes in English/Grammar in Communications	CC

Com: Alt. Eng

UNIT	TOPIC	
I	Writing a Business Letter	PB
	Writing an Essay	PB
II	Preparing a Business Report....	GB
	Transcoding.....	GB
	Writing Business/Official Memos	CC
III	Sri Aurobindo, J.Krishnamurthy, Satyajit Ray	CC
IV	J.M.Coetze, V.S.Naipaul, Amitabh Ghosh	GB

Major III : History of the English Language, Critical terms & Classical Mythology

UNIT	TOPIC	
I	History of the English Language	BRP
II	Critical Terms and Concepts	SD
III	Classical Mythology	JD

Major IV: Reading Poetry

UNIT	TOPIC	
I	Shakespeare:Sonnets-18,60,65	CC
	Donne: Valediction Forbidding Mourning	CC
	Herbert: Collar	CC
II	Milton: Paradise Lost Bk I	GB
III	Wordsworth:Tintern Abbey	CC
	Keats: Ode on a Grecian Urn	CC
IV	Browning: The Last Ride Together	PB
	Arnold: Dover Beach	PB
V	Yeats: The Second Coming	PB
	T.S.Eliot: Journey of the Magi	PB

SEM V

Major VII: Reading Drama

UNIT	TOPIC	
I	Nature of drama from the Renaissance to the Modern period	BRP/CC/PB
II	King Lear	BRP
III	Pygmalion	CC
IV	Waiting for Godot	PB

Major VIII: Criticism I

UNIT	TOPIC	
I	Aristotle: Poetics	SD

II	Longinus: On the Sublime	PB
III	Sidney: An Apology for Poetry	JD
IV	Samuel Johnson: Preface to Shakespeare	PB

Major IX: Great European Thinkers

UNIT	TOPIC	
I	Machiavelli: Selections from the Prince	SD
	(Chapters III,XVIII,XIX:"The Prince is a Mixed Principality")	
II	John Locke: Selections from Essay Concerning Human Understanding	SD
	("The Nature of Language":Book II: [Ch. IX])	
III	Jean-Jacques Rousseau: Selections from The Social Contract	GB
	(Book I:"Citizen")	
IV	Karl Marx: Selections from the Communist Manifesto('Bourgeois and	BRP
	Proletariat")	

Major X: Indian Writing in English

UNIT	TOPIC		
I	History of Indian Writing in English		GB/JD/CC
II	Fiction: **Raja Rao - Kanthapura**		CC
III	Non-Fictional narrative: **Vikram Seth-From Heaven Lake**		JD
IV	**Poetry:**		
	Nissim Ezekiel:	Night of the Scorpion	GB
	Keki Daruwala:	Gulzaman's Son	GB
	A.K.Ramanujan:	The Last of the Princes	GB
	Jayanta Mahapatra:	Hunger	GB

HS I: Arts / Sc /Com (GEN. ENG)

SECTION-A Reading Skills

Reading unseen passages for Comprehension and Note-making: a) Factual passages, e.g. Instructions, descriptions, reports. b) Discursive passages involving opinion e.g. argumentative, persuasive	JD/ BRP/JD

SECTION- B Writing Skills

a) Factual description of any event or incident, a report on a process based on verbal input provided (80-100 words)	PB/SD/SD

SYLLABUS DISTRIBUTION
DEPT. OF ENGLISH
SESSION: JAN-JUNE, 2017

HS I: TO CONTINUE AS BEFORE

SEM II: *ARTS/SC.* - **GEN.ENG**

UNIT	TOPIC	FACULTY
I SHORT STORIES	O HENRY: THE LAST LEAF	BRP/JD
	R.K. NARAYAN: UNDER THE BANYAN TREE	
	VIKRAM SETH: AN INDIAN IN CHINA	GB/CC
UNIT II PROSE	VERRIER ELWIN: PILGIMAGE IN TAWANG	
	ORWELL: REFLECTIONS ON GANDHI	PB/SD
	STEPHEN HAWKING: OUR PICTURE OF THE UNIVERSE	

COMMERCE: BUS.COM

UNIT	TOPIC	FACULTY
I	BUSINESS LETTERS & MEMO FORMATS.....	JD
II	WRITING SKILLS	JD
III	REPORT-WRITING	CC
IV	INTERVIEWING SKILLS	CC/SD
V	GROUP DISCUSSIONS	SD

MAJOR II: HISTORY OF ENGLISH SOCIETY AND CULTURE

UNIT	TOPIC	FACULTY
I	THE NEO-CLASSICAL AGE	CC
II	THE ROMANTIC PERIOD	
III	THE VICTORIAN PERIOD	SD
IV	THE TWENTIETH CENTURY (1900-1945)	PB
V	THE TWENTIETH CENTURY(1945-2000)	

ALT.ENG

UNIT	TOPIC	FACULTY
I	SWAMI VIVEKANANDA: THE SECRET OF WORK SRI AUROBINDO: THE IMPORTANCE OF ORIGINAL THINKING	PB
II	SATYAJIT RAY: FILM-MAKING COETZE: PLAYGROUND	GB
III	V.S.NAIPAUL: BEGINNINGS AMITAV GHOSH: BOOKS	BRP
IV	CRITICAL APPRECIATION OF AN UNSEEN PASSAGE	PB/GB/BRP

SEM IV

Jan-June, 2017

ALT. ENG

UNIT	TOPIC	FACULTY
I	HEMINGWAY: OLD MAN AND THE SEA	PB
II	RABINDRANATH TAGORE: THE WIFE'S LETTER RAJA RAO : JAVNI	BRP
III	SADAT HASSAN MANTO: TOBA TEK SINGH MAHASHWETA DEVI: KUNTI AND NISHADIN	GB

MAJOR V

UNIT	TOPIC	FACULTY
I	BACON'S ESSAYS: OF STUDIES ADDISON: SIR ROGER IN LONDON	CC
II	LAMB: THE SUPERANNUATED MAN ORWELL: POLITICS AND THE ENGLISH LANGUAGE	
III	FIELDING: JOSEPH ANDREWS	SD
IV	JANE AUSTEN: MANSFIELD PARK	BRP

MAJOR VI

UNIT	TOPIC	FACULTY
I	THE SOCIO-POLITICAL CONTEXTS OF THE ENGLISH NOVEL	PB/GB/JD
II	DICKENS: A TALE OF TWO CITIES	PB
III	EMILY BRONTE: WUTHERING HEIGHTS	GB
IV	LAWRENCE: SONS AND LOVERS	JD

SEM VI

MAJOR XI

UNIT	TOPIC	FACULTY
I	WORDSWORTH; PREFACE TO LYRICAL BALLADS	CC
II	COLERIDGE: BIOGRAPHIA LITERARIA	
III	ARNOLD: THE STUDY OF POETRY	GB
IV	T.S.ELIOT: TRADITION AND THE INDIVIDUAL TALENT I.A.RICHARDS: FOUR KINDS OF MEANING	JD

Jan - June, 2017

MAJOR XII

UNIT	TOPIC	FACULTY
I	THE ORIGINS AND RECEPTION OF THE LITERATURE OF THE USA	BRP/JD/SD
II	TWAIN: HUCKLEBERRY FINN	
III	EUGINE O'NEILL: DESIRE UNDER THE ELMS	JD
IV	POETRY: WHITMAN,DICKENSON,FROST,POUND,HUGHES	SD

MAJOR XIII

UNIT	TOPIC	FACULTY
I	INTRODUCTION TO POSTCOLONIAL LITERATURE	PB
II	CHINUA ACHEBE: COLONIALIST CRITICISM	
III	AMITAV GHOSH: THE SHADOWS LINES	BRP
IV	J.M. COETZE: DISGRACE	CC

MAJOR XIV

UNIT	TOPIC	FACULTY
I	PROPERTIES OF LANGUAGE.....	GB
II	BASIC SENTENCE STRUCTURES.....	PB
III	INTRODUCTION: THE USE OF SPOKEN ENGLISH IN INDIA.....	SD

CLASS	MON	TUE	WED	THUR	FRI	SAT
HSI Arts	GB	PB	PB	JD	JD	GB
SC	CC	BRP	BRP	CC	SD	SD
COM	JD	CC	SD	SD	CC	JD
ALT	BRP	GB	JD	BRP	GB	-
SEMI Arts	JD/BRP	SD/GB	CC/GB	SD/PB	JD/BRP	CC/PB
SC	JD	SD	CC	SD	JD	CC
COM	SD	JD	CC	JD	CC	SD
ALT	PB	BRP	GB	BRP	PB	GB
MAJ II	SD	PB	CC	PB	SD	CC
SEM IV Alt	GB	BRP	BRP	GB	PB	PB
MAJ V/VI	PB/GB	CC/SD	BRP/JD	PB/CC	SD/GB	BRP/JD
SEM VI	CC/BRP SD/PB	CC/JD SD/GB	GB/JD PB/SD	CC/BRP SD/GB	BRP/JD PB/CC	PB/GB BRP/JD
BRP	3	3	3	3	2	2
GB	3	3	3	2	2	3
PB	3	2	2	3	3	3
JD	2	2	3	2	3	2
SD	3	3	2	3	3	2
CC	2	3	3	3	3	2

Course Distribution for the Session (June- December) 2016,

Department of Hindi, Digboi College, Digboi.

COURSE / UNIT	Dr. P K BHARATI	Dr. (Mrs.) A K SAHU
H.S.-I- MIL Hindi	Unit -II Rachanatmak Lekhan, Unit -III Kavya Khand, Unit -IV-Moukhik Prikshan,	Unit-I Apathit Bodh, Unit -III Gadya Khand & Vitan -1,
H.S.-I-Adv. Hindi	Unit -III Kahani, Unit -IV Nibandh, Unit -V History of Hindi Literature,	Unit -I Old Poetry, Unit –II Modern Poetry,
H.S.-II –MIL Hindi	Unit -II Rachanatmak Lekhan or Jansanchar, Unit -III Gadya Khand & Vitan-2,	Unit -I Apathit Bodh, Unit -III Kavya Khand,
H.S.-II-Adv. Hindi	Unit -III Rani Laxmibai (Novel) Unit -IV Ras, Chhand, Alankar,	Unit - I Modern Poetry, Unit – II Bhaskar Varman (Drama)
Sem.- I MIL Hindi	Unit -I Prachin & Madhya Kavya, Unit -II Aadhunik Kavya,	Unit – III Dhruvaswamini, (Novel) Unit - IV Jivan our Sahitya.
Sem.-I (Elec. Hindi)	Unit -I Gadya Katha Sahitya, Unit- III Naye Ekanki,	Unit- II Pachapan Khambhe Lal Deevaren, Unit- IV Jivan our Sahitya,
Sem.-III (Elec. Hindi)	Unit-I Karyalayee Hindi, Unit-IV Patra Lekhan, Aalekhan & Tippan,	Unit- II Pallavan, Unit- III Anuvad,
Sem.-III MIL (Com.)	Unit -II Vigyapan, Unit -III Karyalayee Hindi,	Unit -I Gadya Katha Sansar, Unit-IV Anuvad,
Sem. V (Elec. Hindi)	Unit-II Bharopiya Parivar, Prachin Bharatiya Arya Bhasha, Unit-III Aadhunik Bhartiya Arya Bhasha,	Unit- I Bhasha our Bhasha Vigyan, Unit- IV Devnagari Lipi, Lipi ka Manak Roop,

HOD (HINDI)

DIGBOI COLLEGE, DIGBOI

Course Distribution for the Session (January- June) 2017,

Department of Hindi, Digboi College, Digboi.

COURSE / UNIT	Dr. P K BHARATI	Dr. (Mrs.) A K SAHU
H.S.-I- MIL Hindi	Unit -II Rachanatmak Lekhan, Unit -III Kavya Khand, Unit -IV-Moukhik Prikshan,	Unit-I Apathit Bodh, Unit -III Gadya Khand & Vittan -1 ,
H.S.-I-Adv. Hindi	Unit -III Kahani, Unit -IV-Nibandh, Unit –V History of Hindi Literature,	Unit -I Old Poetry, Unit –II Modern Poetry,
Sem.-II –MIL Hindi	Unit -I Gadya Katha Aalok, Unit -IV Nibandh,	Unit -II Kali Aandhi, (Novel) Unit -III Vyakaran our Rachana,
Sem.-II-Elec. Hindi	Unit -I Prachin our Navin Kavya, Unit –II Saket (Navam Sarg),	Unit - II Kavyashastra, Unit – IV Alankaar, Chhand,
Sem.- IV- MIL Hindi	Unit -I Vyavaharik Hindi, Unit -III Patra Lekhan,	Unit – II Anuvad, Unit - IV Sankshepan,
Sem.-IV- Elec. Hindi	Unit -III Asamiya Sahitya ka Parichayatmak Itihas, Unit- IV Vaishnavyug, Aadhunikyug,	Unit- I Aadikal, Bhaktikal, Rittikal, Aadhunikkal, Unit- II Chhayavad, Prayogvad, Pragativad, Nai Kavita,Upanyas, Kahani, Natak, Ekanki,
Sem.-VI- Elec. Hindi	Unit- I Alochana Ka Swaroop, Unit- II Hindi Alochana - Shukla & Dwevedi,	Unit-III Jan Sanchar Madhyam, Unit-IV Sanchar Madhyam Ke Vividh Roop,

HOD (HINDI)

DIGBOI COLLEGE, DIGBOI

DEPARTMENT OF HISTORY (COURSE DISTRIBUTION)

SESSION-2016

SEMESTER I

COURSE: I HISTORY OF ASSAM : 1228- 1826

P.K.Narah : Unit I - Unit III(3.02)

A.Neog : Unit III(3.03) – Unit V

SEMESTER III

COURSE:III HISTORY OF Europe: 1453-1815

A.Neog : Unit I – Unit III(3.02)

P.K.Narah : Unit III(3.03) – Unit V

SEMESTER V

COURSE: V History of India: 1526-1947

P.K.Narah : Unit I – Unit III(3.02)

A.Neog : Unit III(3.03) – Unit V

DEPARTMENT OF HISTORY (COURSE DISTRIBUTION)

SESSION-2017

SEMESTER II

COURSE: II HISTORY OF ASSAM : 1826-1947

A.Neog : Unit I - Unit III(3.01)

P.K.Narah : Unit III(3.02) – Unit V

SEMESTER IV

COURSE:IV HISTORY OF INDIA FROM THE EARLIEST TIMES TO 1526

P.K.Narah: Unit I – Unit III(3.03)

A.Neog : Unit III(3.04) – Unit V

MULTI-DISCIPLINARY COURSE

MAIN CURRENTS OF INDIAN HISTORY

P.K.Narah: Indus and the Vedic Culture-Basic Features

States in Early India- Mahajanapadas and Empires-Maurya and Gupta

Religious Movements- Basic Teachings of Buddhism and Jainism

Medieval India- Sultanate Rule- State and Administration

A.Neog : Medieval India- Mughal Rule- State and Administration

Colonial Times- 19th Century Reforms and Constitutional

Developments till 1935

Freedom Struggle of India- Major Phases

SEMESTER VI

COURSE: VI (OPTIONAL-II) WOMEN IN INDIAN HISTORY

P.K.Narah: Unit I – Unit III(3.02)

A.Neog : Unit III(3.03) – Unit V

Course Distribution: Digboi College, Deptt. of Mathematics, Session June-December, 2016-17), wef0 1.06.2016

HS I Math	Sets & Functions	JC	**CMS I**	Unit I	MB
	Calculus	JC		Unit II	MB
	Algebra	MB		Unit III	JC
	Trigonometry	JL		Unit IV	KN
	C0-ordinate Geometry	JL		Unit V	JC
	Statistics	AD		Unit VI	JC
	Probability	KN		UnitVII	KN
	Mathematical Reasoning	AD		Unit VIII	MB
HS II	UNIT I	KN	**CMS II**	UNIT I	KN
	UNIT II	KN		UNIT II	JL
	UNIT III	MB		UNIT III	KN
	UNIT IV	JL		UNIT IV	JL
	UNIT V	JL		UNIT V	JL
	UNIT VI	JC		UNIT VI 6.1	KN
				UNIT VI 6.2	JL
SEM I (M)	(A) Unit I-Real Sequences	AD	**SEM I (P)**	(A) Unit I-Real Sequences	AD
	UNIT II-Infinite Series	KN		UNIT II-Infinite Series	KN
	UNIT III -Theory of Equations	JC		UNIT III -Theory of Equations	JC
	(B) Trigonometry	MB		(B) Trigonometry	MB
	© Vector Calculus	JL		(C) Vector Calculus	JL
SEM III (M)	**Paper-MM301**		**SEM III(P)**	(A) 2D	JC
	(A) Differential Calculus			(A) 3D	AD
	UNIT I & II	MB		(B) Analysis I	
	UNIT III	KN		UNIT-I & II	MB
	UNIT IV	JL		UNIT- III & IV	KN
	(B) Integral Calculus	KN			
	(C) Riemann Integral	AD			
	Paper-MM302				
	(A) Co-ordinate Geometry				
	2D	JC			
	3D	AD			
	(B) Algebra -I				
	UNIT- I	KN			
	UNIT-II	MB			
SEM V(M)	**Paper-MM501**		**SEM V(P)**	Analysis-II	
	Logic & Combinatories	JC		(Complex Analysis)	JC
	Complex Analysis	JC		Mechanics	
	Paper-MM502			Statics	AD
	Linear Algebra	MB		Dynamics	KN
	Number Theory	MB			
	Paper-MM503				
	Fluid Mechanics	JL			
	Paper-MM504				
	Statics	AD			
	Dynamics	KN			
	Integral Transform	AD			

1. DR. A.C.DEKA(AD)
2. PROF. K.N. TIMSINA(KN)
3. DR. J. CHANGMAI(JC)
4. DR. J. LAHKAR(JL)
5. PROF. M. BURAGOHAIN(MB)

Jchmai

Dr. J. Changmai
HoD, Maths

Course Distribution:: Dept. of Mathematics, Digboi College, Session January_May, 2017:: Even Sem

Class	Subject	Teacher	Marks	Class	Units	Teacher	Marks
HS I Math	Sets & Functions	JC		**CMS I**	Unit I	MB	
	Calculus	JC			Unit II	MB	
	Algebra	MB			Unit III	JC	
	Trigonometry	JL			Unit IV	KN	
	C0-ordinate Geometry	JL			Unit V	JC	
	Statistics	AD			Unit VI	JC	
	Probability	KN			UnitVII	KN	
	Mathematical Reasoning	AD			Unit VIII	MB	
SEM II (M)	COURSE CODE:MM201			**SEM II (P)**	COURSE CODE:NM201		
	(A) Marices	KN	20		(A) Marices	KN	20
	(B) Ordinary Differential Equatic	MB	30		(B) Ordinary Differential Eq	MB	30
	(C) Numerical Analysis	AD	30		(C) Numerical Analysis	AD	30
SEM IV (M)	**COURSE CODE:-MM401**			**SEM IV(P)**	**COURSE CODE:-NM401**		
	(A)C-PROGRAMMING	JL	50		(A) Linear Prog . Problem	JL	50
	(B) COMPUTER LAB	JL	30		(B) COMPUTER LAB	JL	30
	(C-Programming, Matlab)				(Matlab, Mathematica)		
	COURSE CODE:-MM402						
	(A) Linear Prog. Problem	JL	45				
	(B) Analysis -II(Multiple Integral)	AD	35				
SEM VI(M)	**Paper-MM601**			**SEM VI(P)**	Group B		
	(A)Metric Space	KT	40		a) Discrete Mathematics	JC	40
	(B)Statistics	JC	40		b) Metric Space	KN	40
	Paper-MM602						
	(A) Discrete mathematics	JC	45				
	(B) Graph Theory	MB	35				
	Paper-MM603						
	(A) Algebra II	MB	40				
	(B) Partial Differential Equation	JK	40				
	Paper-MM604(GR.B)						
	(A) Space Dynamics	KT	40				
	(B) Relativity	JL	40				

1. DR. A.C.DEKA(AD)
2. PROF. K.N. TIMSINA(KN)
3. DR. J. CHANGMAI(JC)
4. DR. J. LAHKAR(JL)
5. PROF. M. BURAGOHAIN(MB)

Dr. J. Changmai
HoD, Maths

DEPARTMENT OF PHILOSOPHY

SESSION: 2016—17 (I)

Dr. I. DAS: I SEM. (M), 101 (INDIAN PHILOSOPHY-I),FULL PAPER
V SEM. (p), 501 (INDIAN & WESTERN LOGIC), UNIT: I,III & V
V SEM. (M), 502 (WESTERN LOGIC), FULL PAPER
V SEM. (M), 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: I & II
H.S-I, UNIT: I & II
H.S-II, UNIT I & III

Mr. B. NARZARY: III SEM. (M), 301 (WESTERN PHILOSOPHY), FULL PAPER
III SEM. (P), 301(INDIAN PHILOSOPHY-II), UNIT: I, II & IV
V SEM. (M), 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: II & III
V SEM. (M), 504 (PHILOSOPHY OF RELIGION), FULL PAPER
H.S –I, UNIT: VII & VIII
H.S- II, UNIT: VII & VIII

Dr. R. SARMAH: I SEM. (P), 101 (INDIAN PHILOSOPHY-I), FULL PAPER
III SEM. (M), 301 (INDIAN PHILOSOPHY-II), FULL PAPER
V SEM. (M), 501 (INDIAN LOGIC), FULL PAPER
V SEM. (M), 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: IV
H.S-I, UNIT: V & VI
H.S-II, UNIT: V & VI

Mr. D. RIMAL: III SEM. (P), 301 (INDIAN PHILOSOPHY-II), UNIT: III, IV & V
V SEM. 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: V
V SEM. (P), 501 (INDIAN AND WESTERN LOGIC), IV & V
H.S-I, UNIT: III &IV
H.S-II, UNIT: II & IV

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DEPARTMENT OF PHILOSOPHY

SESSION: 2016—17 (II)

Sl. No.	Name	Course allotted	No. of class allotted (weekly)	Remarks
1	**Dr. Itu Das**	(a) M-401(Indian Ethics, Full P) (b) M-604(Psychology Full P) (c) M-603(Social and Political Philosophy, Unit: I & II) (d) NM-601(Social Philosophy & Psychology, Unit: I, II & III) (e) HS-I(unit: I & II)	06 06 02 03 01	
2	**Mr. Bisti Ram Narzary**	(a) NM-201(Western Philosophy, Unit: I,II & III) (b) M-402(Western Ethics Full P) (c) M-602(Contemporary Western Philosophy Full P) (d) M-603(Social and Political Philosophy, Unit: III & IV) (e) HS-I(Unit: VII & VIII)	03 06 06 02 01	
3	**Dr. Reepa Sarmah**	(a) M-201(Western Philosophy, Full P) (b) NM-401(Western Philosophy-II, Unit: I II & III) (c) M-601(Contemporary Indian Philosophy, Full P) (d) M-603(Social and Political Philosophy, Unit: IV & V) (e) HS-I(Unit: V & VI)	06 03 06 02 01	
4	**Mr.Dipendra Rimal**	(a) NM-201(Western Philosophy-I, Unit: III, IV & V) (b) NM-401(Western Philosophy-II, Unit: III, IV & V) (c) NM-601(Social Philosophy & Psychology, Unit: III, IV & V) (d) HS-I(Unit: III & IV)	03 03 03 03	

1. Dr. Itu Das
2. Mr. Bisti Ram Narzary
3. Dr. Reepa Sarmah
4. Mr. Dipendra Rima

Department of Physics, Digboi College

Course Distribution

From July to December 2016

(Odd Semester)

B. SC. 1st SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 101	Mechanics and Properties of Matter	Dr K Konwar Dr P Basyach

B. SC. 1st SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 101	Mechanics and Thermodynamics	Dr C Siam

B. SC. 3rd SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 301	Optics	Dr R patowary Dr C Siam
PHYM - 302	Electricity & Magnetism	Dr K Konwar
PHYM - 303	Laboratory	Dr K Konwar

B. SC. 3rd SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 301	Electricity, Magnetism and Electromagnetic Theory	Dr K Konwar Dr P Basyach

B. SC. 5th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 501	Mathematical Physics II	Dr R Patowary
PHYM - 502	Electrodynamics & Special Relativity	Dr P Basyach
PHYM - 503	Atomic & Molecular Physics	Dr N Gogoi
PHYM - 504	Electronics	Dr K Konwar
PHYM - 505	Laboratory	Dr K Konwar

B. SC. 5th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 501	Atomic and Nuclear Physics	Dr P Basyach

M. SC. 1st SEMESTER (NCBCS) (1st Batch, Started on June 2016)

Paper Code	Title	Name of Faculty
PH-10100	Mathematical Physics	Dr R Patowary
PH-10200	Classical Mechanics	Dr K Konwar
PH-10300	Quantum Mechanics - I	Dr P Basyach
PH-10400	Electrodynamics and Fluid Dynamics	Dr C Siam
PH-10500	Laboratory	Dr K Konwar Dr P basyach

Department of Physics, Digboi College
Course Distribution
From January to June 2017
(Even Semester)

B. SC. 2nd SEMESTER (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 201	Thermal Physics & Waves and Oscillation	Dr K Konwar Dr P Basyach

B. SC. 2nd SEMESTER (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 201	Optics	Dr R Patowary
PHYG - 202	Practical-I	Dr R Patowary

B. SC. 4th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 401	Mathematical Physics I	Dr R Patowary
PHYM - 402	Quantum Mechanics	Dr P Basyach Dr K Konwar
PHYM - 403	Laboratory	Dr K Konwar Dr P Basyach

B. SC. 4th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 401	Quantum Mechanics & Mathematical Physics	Dr P Basyach Dr K Konwar
PHYG - 402	Practical-II	Dr P Basyach

B. SC. 6th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 601	Statistical Mechanics	Dr P Basyach
PHYM - 602	Condensed Matter Physics	Dr S Bhuyan
PHYM - 603	Nuclear Physics	Dr R Patowary
PHYM - 604	Laser and its Application	Dr K Konwar
PHYM - 605	Laboratory	Dr K Konwar

B. SC. 6th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 601	Electronics & Solid state Physics	Dr K Konwar
PHYG - 602	Practical -III	Dr P Basyach

M. SC. 2nd SEMESTER (NCBCS) (1st Batch)

Paper Code	Title	Name of Faculty
PH-20100	Quantum Mechanics II	Dr P Basyach
PH-20200	Nuclear and Particle Physics	Dr R Patowary
PH-20300	Condensed Matter Physics	Dr N Gogoi
PH-20400	Electronics	Dr K Konwar
PH-20500	Laboratory	Dr K Konwar Dr N Gogoi

DEPARTMENT OF ZOOLOGY

COURSE DISTRIBUTION OF SEMESTER I, III & V (MAJOR & GENERAL) for the Academic Session 2016-17

SAIBAL DEV, ASSOC. PROF

SEMESTER I MAJOR

PAPER: ZOOMT:101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION MARKS: 12 IA+ 48 = 60

UNIT -1: PROTOZOA – General characters and classification up to orders with examples; Locomotion, nutrition and reproduction in Protozoa.

UNIT-2: HELMINTHES – General characters and classification up to orders with examples

UNIT-5: Modern concept in Taxonomy (Molecular, Chemotaxonomy).

ZOOM P : 102 MARKS : 8 IA + 32 =40

1. Dissection of the digestive and nervous systems of cockroaches.
2. Identification of laboratory specimens as per syllabus
3. Preparation of permanent slides & mounting of a minimum of five suitable non-chordate specimens & their submission

SEMESTER I GENERAL

ZOOGT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION MARKS: 12 IA+ 48 = 60

UNIT -1: PROTOZOA: Locomotion, nutrition and reproduction in Paramoecium and Leishmania

UNIT -2: Platyhelminthes & Nenathelminthes : Life cycle of Ascaris and Taenia, Reproduction and Parasitic adaptation.

UNIT –5: Concept of species & speciation; Origin of life on earth.

ZOOGP : 102 MARKS : 8 IA + 32 =40

1. Dissection of digestive and nervous system of cockroach.
2. Identification of laboratory specimens as per syllabus
3. Preparation of permanent slides from suitable non-chordate specimens

SEMESTER III MAJOR

ZooMT : 301 CHORDATE DIVERSITY AND COMPARATIVE ANATOMY 12(IA)+48=60

UNIT -1: (Entire) General characters of chordates ----- to ---- affinities of protochordates.

UNIT -5: Comparative anatomy of pectoral and pelvic girdles of tetrapoda ; comparative account of alimentary system in reptiles, birds and mammals.

ZooMP : 302 (PRACTICAL) 8(IA)+32=40

1.DISSECTION- Efferent branchial system of Scoliodon.

2. IDENTIFICATION – Vertebrate specimens

3. PREPARATION OF PERMANENT SLIDES –Vertebrate exoskeletons – feather, scales etc.

4. STUDY OF BONES- Pectoral and Pelvic girdles of Amphibia.

ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS 12(IA)+48=60

UNIT-5: Measures of statistical average ---- to --- Significance test (t, F and chi-square test).

ZooM-304 (PRACTICAL) 8(IA)+32=40

1.Separation of chlorophyll by paper chromatography.

2.Statistical calculations – central tendency, deviations, correlation, regression & t test.

SEMESTER III GENERAL :

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY
12(IA)+48=60
UNIT-1: General characters of chordates; Protochordates; classification up to orders, structural organization of Hemichordates, Urochordates.
UNIT-4: Fertilization – types and mechanism ; Parthenogenesis.
ZooGP – 302 (PRACTICAL) 8(IA)+32=40
1.DISSECTION – External morphology, Efferent branchial system of Scoliodon.
2.IDENTIFICATION – Vertebrate specimens.
3. PRPARATION OF PERMANENT SLIDES
4. STUDY OF CHICK EMBRYO DEVELOPMENT UPTO 72 HOURS BY PERMANENT SLIDES.

SEMESTER V MAJOR
ZooMT-501 GENETICS AND EVOLUTION 12(IA)+48=60
UNIT -2: Determination of sex, Sex linked inheritance, Cytoplasmic Inheritance.
UNIT -4: Origin of life (chemical & biological origin) ---- to ---- fossil and fossilization.
ZooMP – 502 PRACTICAL 8(IA)+32=40
1.Study of materials/ organisms of evolutionary significance (Rocks, Fossil and Connecting links).

ZooMT -503 ANIMAL PHYSIOLOGY 12(IA)+48=60
UNIT -2: (Entire) Digestion – site and sequence of digestion ----- to ---- balanced diet.
UNIT -3: (Entire) Excretion – structure and function of nephron --- to ---- dialysis.

ZooMP – 504 PRACTICAL 8(IA)+32=40
1.Qualitative test of salivary amylase.
2.RBC and WBC counting by haemocytometer.
ZooMT- 505 ENVIRONMENTAL BIOLOGY AND WILDLIFE 12(IA)+48=60UNIT-3: Biogeochemical cycles – phosphorus & hydrological cycles.
UNIT-5: IUCN status of species category; important endamgered species of N.E. India – Dancing deer, river dolphin, pigmy hog, white winged wood duck, golden mahaseer.
ZooMP – 506 PRACTICAL 8(IA)+32=40
1.Determination of dissolved oxygen / alkalinity in the water samples.
2.Field study
3. Project Work (Project topics should be discussed and distributed among faculty members)
ZooMT – 507 : ENDOCRINOLOGY 12(IA)+48=60
UNIT -1: Comparative anatomy of pancreas in Fish, Amphibia, Birds and Mammals.
UNIT 3: (Entire) General characters of hormones --- to --- hypo & hypersecretion of hormones.
ZooMP – 508 PRACTICAL 8(IA)+32=40
1. Histological preparation of thyroid gland.
2. Study of permanent slides of endocrine glands.

SEMESTER V GENERAL
ZooGT- 501 : GENETICS AND MOLECULAR BIOLOGY 12(IA)+48=60
UNIT- 4: Concept of central dogma, genetic code, basic steps of transcription and translation .
ZooGP – 502 PRACTICAL 8(IA)+32=40
1. Preparation of nucleotides using ball and stick model.
2.Preparation of slides of meiosis using suitable material

RAJIB RUDRA TARIANG, ASST. PROF

SEMESTER I MAJOR
ZOOMT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION
MARKS : 12IA + 48=60
UNIT-1: PORIFERA : General characters and classification upto orders with examples; Skeletal and Canal systems in Sycon. COELENTERATA : General characters and classification upto orders with examples; Polymorphism and Defensive mechanism in coelenterate, Coral reefs and their formation.
UNIT-5: Modern concept in Taxonomy (Numerical & Cytotaxonomy)

ZOOMP:102 MARKS: 8IA + 32=40
1. Dissection –Nervous system of Pila / Acatina , Reproductive system of cockroach
2. Identificatiopn of Invertebrate specimens as per the syllabus.
3. Study of Morphotaxonomy of locally available animals.

SEMESTER I GENERAL
ZOOGT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION
MARKS : 12IA + 48= 60
UNIT-1: NON-CHORDATES – Salient features and classification upto classes of different phyla.
UNIT-2: PORIFERA & COELENTERATA – Canal system in Porifera; Coral and coral reefs.
UNIT-5: Variation, mutation, recombination, isolation and natural selection, adaptive radiation.

ZOOGP: 102 MARKS: 8IA + 32=40
1. Dissection – digestivesystem of Pila/Acatina
2. Identification of Invertebrate specimens
3. Preparation of permanent slides of suitable invertebrate animals.

SEMESTER III MAJOR
ZooMT – 301: CHORDATE DIVERSITY AND COMPARATIVE ANATOMY
12(IA)+48=60
UNIT- 2: (Entire)- Distinctive characters of Petromyzontia --- to --- parental care in fish.
UNIT - 3: Distinctive characters and classification of Reptilia upto order with example --- to ---- biting mechanisms of poisonous snakes.
ZooMP- 302 PRACTICAL 8(IA)+32=40
1. DISSECTION – Internal ear of Scoliodon.
2. IDENTIFICATION
3. DEMONSTRATION OF Digestive , Circulatory and Respiratory and Urinogenital systems of Reptiles, Birds & Mammals through electronic media.

ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS 12(IA)+48=60
UNIT -2: (Entire) Microscopy ----
UNIT-4: Principles and practices of centrifugation; autoradiography.
ZooM-304 (PRACTICAL) 8(IA)+32=40
1. Demonstration of instruments as prescribed in the syllabus.

SEMESTER III GENERAL

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY 12(IA)+48=60

UNIT-2: Reptilia : Classification upto orders --- to --- Biting mechanism.

UNIT-3: Mammalia: Classification upto orders; dentition in mammals.

UNIT-5: Extra embryonic membranes; types and physiology of placenta.

ZooGP : 302 PRACTICAL 8(IA)+32=40

1.DISSECTION – Internal ear of Scoliodon

2.IDENTIFICATION – Vertebrate specimens

3.Study of Chick embryo upto 72 hrs of development by permanent slides.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION 12(IA)+48=60

UNIT -4: Evidences of theories of evolution - - - to - - - Modern synthetic theory.

UNIT-5: Concept of population - - - to - - gene frequency (Genetic drift, gene flow, genetic load).

ZooMP- 502 PRACTICAL 8(IA)+32=40

1.Polytene chromosome of Chironomus or Drosophila larvae.

ZooMT- 503 ANIMAL PHYSIOLOGY 12(IA)+48=60

UNIT- 5: (Entire) Nervous system – neurons --- -- to --- - social implications.

ZooMP- 504 PRACTICAL 8(IA)+32=40

1. Demonstration of knee-jerk reflex
2. Demonstration of osmosis using toad/frog urinary/ alimentary canal.

ZooMT- 505 ENVIRONMENTAL BIOLOGY & WILDLIFE 12(IA)+32=40

UNIT-3: Biogeochemical cycles – carbon & nitrogen cycles; Basic concept of remote sensing and EIA.

UNIT-4: Environmental pollution (Air & soil),

UNIT-5: Major National Parks of N.E.India - - - to - - Wildlife Protection Act, 1972.

ZooMP-506 PRACTICAL 8(IA)+32=40

1.Estimation of size of population by capture recapture method.

2. Study of structural components of an aquatic / grassland ecosystem.

3. Field study

4. Project Work (Project topics should be discussed and distributed among faculty members).

ZooMT-507: **ENDOCRINOLOGY** 12(IA)+48=60

UNIT-1: Comparative anatomy of Adrenal gland of fish, amphibian, bird and mammals.

UNIT-2: (Entire) Hormones secreted by endocrine glands .....

ZooMP-508 PRACTICAL 8(IA)+32=40

1.Histological preparation of adrenal gland .

2.Dissect and display thyroid gland in fish/rat.

SEMESTER V GENERAL

ZooGT- 501 : GENETICS AND MOLECULAR BIOLOGY 12(IA)+48=60

UNIT-3: (Entire) Nucleic acids .....

UNIT-5: Genetic engineering, Restriction enzymes.

ZooGP-502 PRACTICAL 8(IA)+32=40

1.Preparation of slides for study of mitosis and meiosis using suitable material

KISHOR HALOI, ASSTT. PROF

ZOOMT:101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION
MARKS: 12 IA+ 48 = 60

UNIT-2: ANNELIDA : General characters and classification upto orders with examples; Excretion, Reproduction and importance of Pheretima; Coelom and Metamerism in Annelids.
UNIT-3: ARTHROPODA: General characters and classification upto orders with examples; Mouth parts of insects; Larval forms in crustaceaa; Digestion, excretion & vision in Arthropoda; Affinity of Onychophora.
UNIT-5: SYSTEMATICS: Nomenclature – rules of Zoological nomenclature.

ZOOMP: 102 MARKS: 8IA+32=40
1. Dissection of Urinogenital system of earthworm
2. Identification of Invertebrate laboratory specimens

SEMESTER I GENERAL
ZOOGT : 101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION
MARKS: 12 IA+ 48 = 60

UNIT-3: ANNELIDA: Coelom & excretion in Annelida; ARTHROPODA: Mouth parts & legs in insects; crustacean larval forms, social life in honey bee.
UNIT-5: Concept of evolution, evolutionary theories.

ZOOGP: 102 MARKS: 8IA+32=40
1. Dissection of urinogenital system of leech
2. Identification of Invertebrate laboratory specimens
3. Preparation of permanent slides from suitable invertebrate animal.

SEMESTER III MAJOR
ZooMT – 301: **CHORDATE DIVERSITY AND COMPARATIVE ANATOMY**
12(IA)+48=60
UNIT-4: General characters & classification of Aves - - - to - - - migration in birds.
UNIT-5: Comparative anatomy of integument of fish, reptile and mammals. Comparative anatomy of brain & cranial nerves in amphibia and mammals.
ZooMP - 302 PRACTICAL 8(IA)+32=40
1.Dissection – Weberian ossicles of carp /catfish
2.Identification of vertebrate specimens.
3.Preparation of permanent slides.
4. Study of vertebral columns of mammals; pectoral pelvic girdles of reptiles.
ZooMT – 303 : **BIOINSTRUMENTATION & BIOSTATISTICS** 12(IA)+48=60
UNIT-3: Photometry – principle and uses of colorimeter & spectrophotometer.
UNIT-4: Principles and uses of kymography, microtomy and ultramicrotomy. **ZooMT – ZooMP-304** PRACTICAL 8(IA)+32=40
1.Separation of chlorophyll by paper chromatography.
2.Demonstration of instruments as prescribed in the syllabus.
SEMESTER III GENERAL
ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY
12(IA)+48=60
UNIT-3: Aves – classification up to super-orders - - - to - - - bird migration.
UNIT-4: Gametogenesis – spermatogenesis, types of animal eggs, vitellogenesis, egg membranes.

ZooGP : 303 PRACTICAL 8(IA)+32=40
1.Dissection- Efferent branchial system of Carp fish
2.Preparation of permanent slides of suitable vertebrate material.
3. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR
ZooMT-501 GENETICS AND EVOLUTION 12(IA)+48=60
UNIT-2: Linkage --- to --- gene mapping.
UNIT-3: (Entire) Concept of gene --- to ---- Human genome project.
ZooMP-502 PRACTICAL 8(IA)+32=40
1.Study of chromosomal slides of suitable material.

ZooMT-503 ANIMAL PHYSIOLOGY 12(IA)+48=60
UNIT-4: (Entire) Circulation – coronary circulation ---- to ---- tracheal respiration in insects.
ZooMP-504 PRACTICAL 8(IA)+32=40
1.Determination of R. Q. Of cockroach/Goroi fish
2.Preparation of haemin crystal
3.R.B.C. and W.B.C. counting by haemocytometer.
ZooMT- 505 ENVIRONMENTAL BIOLOGY AND WILDLIFE 12(IA)+32=40
UNIT-1: (Entire) Concepts pertaining to ecosystem --- to --- energy flow.
UNIT-2: (Entire) Shelford's Law of tolerance ---- to--- predator –prey relationships.
UNIT-5: IUCN status of species category; important endangered species of NE India. Rhinoceros, Tiger, Golden Langur.
ZooMT-506 PRACTICAL 8(IA)+32=40
1.Find out the abundance and density of insect pests in some essential food commodities.
2. Field study
3. Project work (to be evaluated in semester VI , should be discussed and distributed among the faculty members).

ZooMP-507 ENDOCRINOLOGY 12(IA)+48=60
UNIT-1: Comparative anatomy of Pituitary in Fish, Amphibia, Bird and Mammals.
UNIT-5: (Entire) Neuroendocrine system in insects; role of hormones in growth and development of insects.
ZooMP-508 PRACTICAL 8(IA)+32=40
1. Histological preparation of thyroid gland.
2. Study of permanent slides of endocrine glands.

SEMESTER V GENERAL
ZooGT- 501 GENETICS AND MOLECULAR BIOLOGY 12(IA)+48=60
UNIT-2: (Entire) Concept of gene .....
UNIT-5: Basic steps in gene cloning; cloning vectors.
ZooGP-502 PRACTICAL 8(IA)+32=40
1. Preparation of slides of mitosis and meiosis using suitable material
2. Construction of nucleotides using ball and stick model.

APARAJITA GOGOI, ASSOCIATE PROF. (HOD)

SEMESTER I MAJOR

ZOOMT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION

MARKS : 12IA + 48=60

UNIT -4: MOLLUSCA –Genaral characters and classification upto orders with example; Digestive, respiratory and excretory system of Pila; Shell diversity, torsion and detorsion in Mollusca. ECHINODERMATA - Genaral characters and classification upto orders with example; Water vascular system in starfish, echinoderm larvae.

UNIT-5: Systematics and classification, form and hierarchy of classification; modern species concept.

ZOOMP: 102 MARKS: 8IA + 32 =40

1.Dissection of nervous system of Prawn

2.Identification of Invertebrate specimens

3. Preparation of permanent slides of minimum five suitable invertebrate animals.

SEMESTER I GENERAL

ZOOGT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION

MARKS : 12IA + 48=60

UNIT-4: MOLLUSCA- Torsion and detorsion in gastropoda, economic importance of mollusc; ECHINODERMATA – Feeding and locomotion in starfish.

UNIT-5: Systematics – Definition, classification and its hierarchy; Concept of species and speciation

ZOOGP:102 MARKS: 8IA + 32 =40

1.Dissection of digestive system of cockroach

2. Identification of invertebrate specimens

3. Preparation of permanent slides of suitable invertebrate animals.

SEMESTER III MAJOR

ZooMT – 301: **CHORDATE DIVERSITY AND COMPARATIVE ANATOMY**

12(IA)+48=60

UNIT-3:Distinctive characters and classification of Amphibia upto orders with example; parental care, metamorphosis and neoteny in Amphibia.

UNIT- 4:Mammalia

Unit-5: Comparative account of circulatory system in reptiles, birds and mammals.

ZooMP-302 PRACTICAL 8(IA)+32=40

1. Dissection – 9^{th} and 10^{th} cranial nrves of Scoliodon
2. Identification of vertebrate specimens.
3. Preparation of permanent slides (five minimum slides of vertebrate exoskeleton – scale, feather etc)
4. Study of pectoral and pelvic girdles of bird.

ZooMT – 303 : **BIOINSTRUMENTATION & BIOSTATISTICS** 12(IA)+48=60

UNIT-1:(Entire) Chromatography

UNIT-5: Scope and utility of statistics in Bioscience --- to --- representation of data.

ZooMP – 304 PRACTICAL 8(IA)+32=40

1.Demonstration of instruments prescribed in the syllabus.

SEMESTER III GENERAL

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY

12(IA)+48=60

UNIT-1: Fishes – classification upto orders, respiratory organs and migration.
UNIT-2: Amphibia- classification upto orders, parental care.
UNIT-5: Patterns of cleavage ---- to ---- cell linage.

ZooGP-302 PRACTICAL 8(IA)+32=40

1.Dissection – Afferent branchial system of Scoliodon.
2.Identification as per syllabus. 3. Preparation of permanent slides. 4. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION 12(IA)+48=60

UNIT-1:(Entire)- Mendel's Law of Inheritance.....
UNIT-5: Continental drift --- to --- adaptive radiation

ZooMp-502 PRACTICAL 8(IA)+32=40

1.Simple calculation based on Mendel's mono /dihybrid cross.

ZooMT- 503 ANIMAL PHYSIOLOGY 12(IA)+48=60

UNIT-1: Entire – Muscle and its contraction.....

ZooMP – 504 PRACTICAL 8(IA)+32=40

1.Recording of heart beat of frog by kymograph.
2.Qualitative test of salivary amylase.

ZooMT – 505 ENVIRONMENTAL BIOLOGY AND WILD LIFE 12(IA)+48=60

UNIT-3: Renewable and non-renewable resources ---- to --- sustainable utilization.
UNIT-4: Environmental pollution – (water)—and bioindicators --- to --- ozone layer depletion and its impact.
UNIT- 5: Threats to biodiversity --- to --- ex-situ & in-situ conservation strategies.

ZooMP – 506 PRACTICAL 8(IA)+32=40

4.Find out abundance and densities of terrestrial invertebrates / macrophytes associated fauna by quadrate method.
6. Field study
7. Project work (to be evaluated in VI semester) should be discussed and distributed among the faculty members.

ZooMT – 507 ENDOCRINOLOGY 12(IA)+48=60

UNIT-1: Comparative anatomy of thyroid in fish, amphibian, bird and mammal.
UNIT-4: (Entire) – Roles of hormones in reproductive cycle, pregnancy, parturition and lactation; methods of contraception; amniocentesis and IVF.

ZooMP – 508 PRACTICAL 8(IA)+32=40

1. Histological preparation of gonads.
2. Dissection & display of thyroid gland of fish/ bird.
3. Submission of chart / model of endocrinology.

SEMESTER V GENERAL

ZooGT- 501 GENETICS AND MOLECULAR BIOLOGY 12(IA)+48=60

UNIT -1:Entire - Principles of heredity; Mendel's laws; linkage and crossing over; non-chromosomal inheritance; sex determination in animals.

ZooGP – 502 PRACTICAL 8(IA)+32=40

1.Mendelian problems on monohybrid and dihybrid cross.

COURSE DISTRIBUTION OF SEMESTER II, IV & VI (MAJOR & GENERAL):

MR. SAIBAL DEV, ASSOCIATE PROFESSOR

SEMESTER II MAJOR
PAPER ZooMT - 201 (THEORY) BIOCHEMISTRY - MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: Laws of thermodynamics ------- buffers. (Entire unit)
UNIT 2: Structure and classification of lipids.
PAPER ZooMP – 202 (PRACTICAL) MARKS: 8 (IA) + 32 (END SEM) = 40
4. Estimation of Ascorbic acid in lemon/milk.
5. Separation of amino acids using paper chromatography.

SEMESTER II GENERAL - PAPER-ZooGT-201(THEORY) CELL BIOLOGY AND BIOCHEMISTRY MARKS: 12(IA) + 48(END SEM) = 60
UNIT 3: Cell division (amitosis, mitosis, meiosis).
UNIT 4: Basic principles of biochemistry, acid, base, pH and buffers; types of fats.
UNIT 5: Biological oxidation, glycolysis and Kreb's cycle.
PAPER ZooGP – 202 (PRACTICAL) MARKS: 8 (IA) + 32 (END SEM) = 40
1. Study of mitosis and meiosis with the help of permanent slides.
4. Qualitative test of protein and fat.
5. Qualitative test of salivary amylase.

SEMESTER IV MAJOR
PAPER – ZooMT : 401 (THEORY) CELL BIOLOGY, HISTOLOGY & HISTOCHEMISTRY
MARKS: 12(IA) + 48(END SEM) =60
UNIT 1: Structure and function of lysosome and ribosome.
UNIT 3: (Entire unit) - Cell cycle – molecular events in different phases, regulation of cell cycle normal and malignant cell growth; cell division (mitosis & meiosis); programmed cell death (apoptosis).

UNIT 5: Histological structure of muscles and epithelium.
PAPER – ZooMP : 402 (PRACTICAL) MARKS : 8 (IA) + 32 (END SEM) = 40
1. Study of mitosis in tadpole tail, onion root tip.
3. Histochemical localization of – General lipid by Sudan black B method.
4. Histological Preparation of vertebrate tissue – liver stomach, intestine, kidney, pancreas, testes and ovary and submission of slides.

PAPER – ZooMT : 403 (THEORY) DEVELOPMENTAL BIOLOGY
MARKS : 12(IA) + 48(END SEM) = 60
UNIT 1: (Entire) – Gametogenesis – formation of gametes (spermatogenesis; oogenesis); structure, maturation and growth of sperm and ovum; vitellogenesis.

PAPER – ZooMP : 404 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
1. Study of permanent slides of different embryonic stages of frog/toad.
3. Submossion of permanent stained preparation of at least two stages upto 72 hrs. development stages of chick embryo.

SEMESTER IV GENERAL
PAPER ZooGT – 401 (THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY
MARKS : 12 (IA) + 48(END SEM) = 60
UNIT 1. Balanced diet; digestion and absorption of carbohydrate.
UNIT 2. Composition and constituents of blood groups and Rh factor.
UNIT 4. A brief outline of organisation of endocrine system in mammals; anatomy of thyroid gland.
UNIT 5. Functions of hormones of thyroid gland.

PAPER ZooGP – 402 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
2. Blood group determination.
3. Counting of WBC/RBC (haemocytometer)
5. Study of histological slides of endocrine glands.

SEMESTER VI MAJOR
PAPER ZooMT – 601 (THEORY) PARASITOLOGY AND ETHOLOGY
MARKS:12(IA) + 48(END SEM) = 60
UNIT 1: Life history and mode of infection of and pathogenicity of Leishmania donovani.
UNIT 2: General organization and pathogenicity of bacteria and viruses (Rickettsia, Borrelia, Treponema and Leptospira); life history , parasitic adaptation and pathogenicity of Taenia solium.
UNIT 4: Sense organs and behaviour.

PAPER ZooMP – 602 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40
2. Study of protozoan parasites (permanent slides)
4. Study of habituation in mosquito larvae.

PAPER – ZooMT : 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY
MARKS : 12(IA) + 48(END SEM) = 60
UNIT 2 : Replication and transcription; genetic code; Wobble hypothesis; protein biosynthesis in prokaryotes.
UNIT 5 : Immunoglobulin : Basic structure, classes and functions; clonal selection theory; polyclonal and monoclonal antibodies.

PAPER – ZooMT : 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48(END SEM) = 60
UNIT 1: Introduction, history and scope, basic knowledge of genetic engineering, protoplast fusion and somatic hybridization technique; Basic principles of recombinant DNA

technology, cutting, joining and visualization of DNA fragments, cloning vectors and gene cloning; application of DNA technology in agriculture and health.

PAPER – ZooMP : 605 (PRACTICAL) MARKS: 13(IA) + 52(END SEM) = 65
Project work = 15 Total =80

1.Determination of blood group and Rh factor.
5. Study of blood cell types in blood smear slides & PROJECT WORK OF VI SEM (M)

PAPER – ZooMT : 606 (THEORY) ECONOMIC ZOOLOGY
MARKS : 12(IA) + 48 (END SEM) = 60

UNIT 3: (Entire) Life history of honey bee (Apis indica); rearing techniques of honey bee; biology and culture of of lac insect.

PAPER – ZooMP : 607 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
7. Apiculture – culture of honeybee and extraction of honey.
8. Analysis of nutrients (carbohydrate, protein and lipid) of honey

SEMESTER VI GENERAL
PAPER – ZooGT : 601 (THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS
UNIT 5: (Entire) Sampling of data; graphic representation of data; histogram, bar diagram and oogive; Mean, maedian and mode; Mean deviation and standard deviation; Significance test(Students' t-test).

PAPER – ZooGP : 602 (PRACTICAL)
4. Simple biostatistical calculation involving mean, mode median and standard deviation.

RAJIB RUDRA TARIANG, ASSISTANT PROFESSOR

SEMESTER II MAJOR PAPER ZooMT: 201(THEORY) BIOCHEMISTRY

MARKS : 12(IA) + 48(END SEM) = 60

UNIT 4: Enzymes – nomenclature, IUB classification, Kinetics and mechanism of action; enzyme inhibition; coenzymes.

UNIT 5: DNA as genetic material, Genetic code, Transcription.

PAPER – ZooMP; 202 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Preparation of normal, molar and buffer solution.
2. Qualitative test for carbohydrates to identify common mono & disaccharides.
3. Essay of enzyme urease/peroxidase by titrimetric method.

SEMESTER II GENERAL

PAPER – ZooGP: 201(THEORY) CELL BIOLOGY AND BIOCHEMISRTY

MARKS:12(IA) + 48(END SEM) = 60

UNIT 1: Structure and function of Golgi bodies, Endoplasmic reticulum

UNIT 4: Nature and function of enzymes, vitamins – their sources and functions.

PAPER – ZooGP : 202 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

2. Preparation of slide for the study of mitosis and meiosis with suitable materials.
4. Qualitative test of carbohydrate.

SEMESTER IV MAJOR

PAPER – ZooMT : 401 (THEORY) CELL BIOLOGY , HISTOLOGY & HISTOCHEMISTRY

MARKS:12(IA) + 48(END SEM) = 60

UNIT 1: Structure and function of ER, Golgi bodies.

UNIT 5: Animal tissues- types and functions; histological structure of lung, liver.

PAPER – ZooMP : 402 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Study of mitosis in tadpole tail, onion root tip.
2. Meiosis in testes of grasshopper or cockroach
4. Histological preparation of liver, stomach, intestine, kidney, pancreas, testes and ovary of vertebrates and submission of slides.

PAPER – ZooMT : 403 (THEORY) DEVELOPMENTAL BIOLOGY

MARKS:12(IA) + 48(END SEM) = 60

UNIT 4: Organogenesis – development of sense organs – ears.

UNIT 5: Extra embryonic membranes in birds and placentation in mammals.

PAPER – ZooMP : 404 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Study of permanent slides of different embryonic stages of toad/frog.
3. Submission of permanent stained preparation of at least two stages upto 72 hrs. development stages of chick embryo.

SEMESTER IV GENERAL – PAPER : ZooGT : 401(THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY MARKS:12(IA) + 48(END SEM) = 60

UNIT 2: Physiology of respiration in mammals

UNIT 3: Drug addiction and its impact on society.

UNIT 4: Anatomy of pituitary and pancreas; neuroendocrine system in insects.

UNIT 5: Functions of hormones of pituitary and pancreas.

PAPER – ZooGP; 402(PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Preparation of haemin crystals

2. Blood group determination

5. Study of histological slides of endocrine glands.

SEMESTER VI

PAPER – ZooMT: 601(THEORY) PARASITOLOGY AND ETHOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: Life history, mode of infection and pathogenicity of Giardia intestinalis.

UNIT 2: Life history, parasitic adaptation and pathogenicity of Wuchereria bancrofti.

UNIT 3:(Entire) Vectors of human diseases- Malaria, Yellow fever, Dengue, haemorrhagic fever, filariasis, Japanese B-encephalitis and dengue; measures of control of the vectors.

UNIT 5: Social behaviour in insects.

PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

3. Study of geotactic, phototactic, chemotactic and sociotactic behaviour of earthworm, cockroach, Paramecium and fish.

4. Study of habituation in mosquito larvae.

PAPER ZooMT; 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: (Entire) Genome organization in prokaryotes and eukaryotes, DNA as genetic material, structure and functions of DNA & RNA; Watson & Crick Model of DNA; Other forms of DNA.

UNIT 5: AIDS

PAPER – ZooMT: 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: Industrial biotechnology with special reference to production of alcohol and antibiotics.

UNIT 3: (Entire) Regulation of biotechnology: production and application of transgenic animals and plants. Genetically modified organism, their benefits and risk assessment; IPR, patents and ethical issues related to biotechnology .

PAPER – ZooMP : 605 (PRACTICAL) MARKS : 13(IA) + 52(END SEM) = 65

3. Detection / estimation of RNA PROJECT WORK = 15

5. Study of blood cell types in blood smear. TOTAL=80

PROJECT WORK – VI SEM Major students.

PAPER- ZooMT : 606 (THEORY) ECONOMIC ZOOLOGY

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: (Entire) Major insect pests of paddy, tea and stored grains and their biology; Pest management – chemical and biological; integrated pest management.

UNIT 5: Piggery management and practices of pig rearing.

PAPER – ZooMP: 607(PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1. Identification of silkworms (eri, muga & mulberry), immature and adult stages.
3. Study of important pests of paddy, tea plants and stored grains and their submission.
6. Demonstration of induced breeding in fish.

SEMESTER VI GENERAL

PAPER – ZooGT : 601 (THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 2: (Entire) Food chain and energy flow, food web.

UNIT 4: (Entire) Basic concept of wildlife and Protected Areas of Assam, endangered fauna of NE India and their conservation.

PAPER – ZooGP: 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1. To find out the abundance and density of soil fauna by quadrate method.
2. To find out the biotic components of a grassland/pond ecosystem and make probable food chain and food web.

KISHOR HALOI, ASSISTANT PROFESSOR

SEMESTER II MAJOR MARKS: 12(IA) + 48 (END SEM) = 60
PAPER – ZooMT: 201 (THEORY) BIOCHEMISTRY MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 2. Structure and function of carbohydrates, proteins, amino acids; levels of organizations of proteins.
UNIT 5. Structure and functions of DNA and RNA; DNA replication.

PAPER – ZooMP: 202 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) = 40
1. Preparation of normal, molar and buffer solution.
2. Qualitative test for carbohydrates to identify common mono & disaccharides.
3. Essay of enzyme urease/peroxidase by titrimetric method.

SEMESTER II GENERAL
PAPER- ZooGT: 201(THEORY) CELL BIOLOGY AND BIOCHEMISTRY
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: Structure and function of plasma membrane, membrane transport- osmosis, diffusion and active transport.
UNIT 3: Cell cycle; basic concept of cancer.
UNIT 4: Types of carbohydrates, proteins.

PAPER – ZooGP: 202 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) = 40
1. Study of mitosis and meiosis with the help of permanent slides.
3. Preparation of normal and molar solution.
4. Qualitative test of carbohydrate.
5. Qualitative test of salivary amylase.

SEMESTER IV MAJOR
PAPER – ZooMT : 401 (THEORY) CELL BIOLOGY, HISTOLOGY AND HISTOCHEMISTRY
MARKS: 12(IA) + 48(END SEM) = 60
UNIT 1. Overview of prokaryotic and eukaryotic cells; structure and function of plasma membrane (lipid bilayer model); extra cellular matrix; receptor mediated endocytosis.
UNIT 2. DNA packaging in prokaryotes and eukaryotes, models of chromosomal movements.
UNIT 5. Types of staining; vital staining, classification and properties of dyes; metachromatic dyes and staining; animal tissues – histological structure of stomach and intestine.
PAPER- ZooMP:402 (PRACTICAL) MARKS: 8(IA) + 32(END SEM)= 40
1. Study of mitosis in tadpole tail.
2. Meiosis in testes of grasshopper or cockroach.

4. Histological preparation of liver, stomach, intestine, kidney, pancreas, testes and ovary of vertebrates and submission of slides.

PAPER-ZooMT: 403 (THEORY) DEVELOPMENTAL BIOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 3: (Entire) Cleavage and gastrulation – cleavage pattern ---- to--- inductive substances.

UNIT 5: Organogenesis – development of eyes.

PAPER- ZooMP: 404 (PRACTICAL) MARKS: 8(IA) + 32(END SEM)= 40

2.Study of permanent slides of developmental stages in chick embryo.

SEMESTER IV GENERAL

PAPER- ZooGT: 401 (THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: Physiology of excretion in mammals.

UNIT 3: Neurons and conduction of nerve impulse.

UNIT 5: General characters of hormones, feedback mechanism

PAPER-ZooGP: 402 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) =40

1. Preparation of haemin crystal.
1. Counting of WBC/RBC (haemocytometer)
5. Study of histological slides of endocrine glands.

SEMESTER VI

PAPER – ZooMT: 601 (THEORY) PARASITOLOGY AND ETHOLOGY

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: Life history, mode of infection and pathogenicity of Trichomonas vaginalis & Plasmodium spp.

UNIT 2: Life history, parasitic adaptation and pathogenicity of Ancylostoma duodenale.

UNIT 4: Introduction to animal behaviour; brief history of ethology; patterns of behaviour; genetical and ecological aspect of behaviour.

PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1. Identification of mosquito species causing malaria, encephalitis, and dengue fever.

3. Study of geotactic, phototactic, chemotactic and sociotactic behaviour of earthworm, cockroach, Paramecium and fish.

PAPER ZooMT; 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 3: (Entire) Recombination in prokaryotes; transformation, conjugation and transduction;concept of transposons and plasmids; regulation of gene expression in prokaryotes, operon concept(Lac operon).

UNIT 5: Major histocompatibility complex- structure and function; immune system in health and disease.

PAPER- ZooMT: 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 2: DNA sequencing, human genome project.
UNIT 4: Nucleic acid and protein sequence database (NCBI, gene bank and SWISS-PROT) Data mining and data mining tools.
PAPER-ZooMP:605 (PRACTICAL) MARKS: 13(IA) + 52(END SEM) = 65
3.Detection/ estimation of RNA PROJECT WORK =15 TOTAL=80
7.Different e-resources and database search
8.Similarity search in sequence such as BLAST / FASTA

PAPER- ZooMT: 606 (THEORY) ECONOMIC ZOOLOGY
MARKS: 12(IA) + 48(END SEM) = 60
UNIT 2: (Entire) Life histories of silk worm (eri, muga and mulberry); culture technique of silk worms; diseases of silk worms and its prevention.
UNIT 5: Poultry: selection of breed (chicken and duck) and their scientific rearing methods; poultry diseases and its prevention/control.

PAPER- ZooMP: 607 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) = 40
1. Identification of silkworms (eri, muga and mulberry)
2. Submission of life cycles of eri/muga/mulberry silkworms.
7. Apiculture- culture of honey bee and extraction of honey.
8. Analysis of nutrients (carbohydrate, protein and lipid) of honey.

SEMESTER VI GENERAL
PAPER-ZooGT: 601(THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS
MARKS:12(IA) + 48(END SEM) = 60
UNIT 3: (Entire) Environmental pollution and types, sources, cause, control and prevention of air and water pollution; biogeochemical cycles (carbon & nitrogen), green house effect, ozone depletion and its impact.

PAPER-ZooGP: 602 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) =40
1. To find out the abundance and density of soil fauna by quadrate method.
2. To find out the biotic components of a grassland /pond ecosystem and make probable food chain and food web.

APARAJITA GOGOI, ASSOCIATE PROFESSOR

SEMESTER II MAJOR (THEORY)
PAPER- ZooMT : 201 (THEORY) BIOCHEMISTRY MARKS: 12(IA) + 48 (END SEM) =60
UNIT 3: General concept of metabolism – Glycolysis, Kreb's cycle, Electron transport system, and ATP synthesis; Beta oxidation of fatty acids.
UNIT 4: Vitamins (sources and functions)

PAPER- ZooMP :202 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
1.Preparation of molar, normal and buffer solution
2. Essay of enzyme urease/ peroxidise by titrimetric method.
4. Estimation of ascorbic acid in lemon / milk.

SEMESTER II GENERAL (THEORY)
PAPER- ZooGT: 201 (THEORY) CELL BIOLOGY AND BIOCHEMISTRY
MARKS: 12(IA) + 48(END SEM)= 60
UNIT 1: General structure and function of prokaryotic and eukaryotic cells;
UNIT 2: Structure and function of mitochondria, nucleus and chromosome.
UNIt 5: Electron transport system , synthesis of ATP.
PAPER-ZooGP: 202 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
3.Preparation of normal and molar solution.
4. Qualitative tests of proteins and fats.

SEMESTER IV MAJOR
PAPER- ZooMT (THEORY) 401: CELL BIOLOGY, HISTOLOGY & HISTOCHEMISTRY
MARKS: 12(IA) + 48(END SEM)= 60
UNIT 1: Structure and function of mitochondria, nucleus
UNIT 4: Basic concept of cell signalling (endocrine, paracrine and autocrine signalling);

Second messengers; function of cell surface receptors- G protein coupled receptors and G-proteins.
UNIT 5: Histological methods- basic principles of fixation, dehydration, embedding, sectioning and spreading; histological structure of bone. kidney.
PAPER- ZooMP: 402 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1.Study of mitosis in onion root tip.
3. Histochemical localization of - a) general lipid by Sudan black B method
b)metachromatic substances by Toluidene blue method.
4. Histological preparation of liver, stomach, intestine, kidney, pancreas testes and ovary of vertebrates and submission of slides.

PAPER –ZooMT : 403 (THEORY) - DEVELOPMENTAL BIOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: Fertilization- types and mechanism of fertilization; mono and polyspermy; parthenogenesis.

UNIT 3: Fate maps, fate of germ layers.

PAPER- ZooMP: 404 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

2.Study of permanent slides of developmental stages in chick embryo.

3.Submission of permanent stained preparation of at least two stages up to 72 hrs. developmental stages.

SEMESTER IV GENERAL

PAPER- ZooGT : 401 (THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1: Digestion and absorption of proteins and fats.

UNIT 2: Blood coagulation

UNIT 4: Anatomy of adrenal gland of mammals

UNIT 5: Functions of adrenal gland.

PAPER- ZooGP : 402(PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

2. Blood group determination

4. Display of pituitary and gonads of fishes.

5. Study of histological slides of endocrine glands.

SEMESTER VI MAJOR

PAPER – ZooMT : 601 (THEORY) PARASITOLOGY AND ETHOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1: Parasitism; types of parasites, hosts and vectors; parasitic adaptations and effects on hosts; life history and mode of infection and pathogenicity of E.histolytica, Trypanosoma spp.

UNIT 2: Life history and parasitic adaptation and pathogenicity of Fasciola hepatica.

UNIT 5: Different types of orientation and communication in animals, comparative aspect of learning, offensive and defensive behaviour.

PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1.Identification of mosquito species causing malaria, encephalitis and dengue fever.

2. Study of protozoan parasites (permanent slides).

PAPER – ZooMT: 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 4: (Entire) Types of immunity; cells and organs involved in immunity; lymphoid organs; antigens, properties of antigens, adjuvants and haptens; antigen- antibody reaction; vaccines and vaccinations.

UNIT 5: Basic concept of immunodiagnostic techniques (immuno-diffusion, RIA and ELISA).

PAPER- ZooMT : 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: Introduction to Omics; basic concept of structural and functional genomics, introduction to proteomics and transcriptomics.

UNIT 4: Fundamentals of bioinformatics: introduction history and scope of bioinformatics; sources of information, internet – world wide web and web browsers; Biological database: introduction, basic concepts of primary and secondary databases.

PAPER- ZooMP: 605 (PRACTICAL) MARKS: 13(IA) + 52 (END SEM)=65 + Project work= 15

Total = 80

2. Preparation and demonstration of ball and stick model of nucleotides.
6. Study of blood cell types in blood smear slides.
8. Similarity search in sequence such as BLAST / FASTA

Project work of VI Sem (M) students.

PAPER- ZooMT: 606 (THEORY) ECONOMIC ZOOLOGY; MARKS: 12(IA) + 48(END SEM)=60

UNIT 4: (Entire)Principles and practices of aquaculture; fish and prawn culture; preparation and management of different types of ponds for fish culture; induced breeding and hybridization technique in fishes; fish preservation methods; fish by-products.

PAPER- ZooMP: 607(PRACTICAL) MARKS: 8(IA) + 32(END SEM)=40

4. Identification of fish and prawn available locally.
5. Identification of common aquatic weeds, plankton and insects.
6. Demonstration of induced breeding in fish.

SEMESTER VI GENERAL

PAPER- ZooGT: 601 (THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1:(Entire) Basic concept of ecosystem; brief account of abiotic and biotic factors in grassland and aquatic ecosystem; population structure.

PAPER-ZooGP: 602 (PRACTICAL) MARKS:8(IA) + 32(END SEM) =40

3.Study of man-made ecosystems (biotic and abiotic components)
4. Simple biostatistical calculations involving mean, median, mode and standard deviation

COURSE DISTRIBUTION

for the

ACADEMIC SESSION: 2017-18

ESTD 1965

ডিগবৈ মহাবিদ্যালয়

DIGBOI COLLEGE

DEPARTMENT OF ASSAMESE

SYLLABUS DISTRIBUTION, 2017-2018(ODD SEMESTER)

1st,3rd and 5th Semester (from July 2017 to Dec 2017)

1st semester

Paper code	Course title	unit	Name of the Teacher
Major I ASMM 101	History of Assamese Literature (From the Beginning to Post Sankardeva Period)	01	Simanta Bordoloi
		02	Deepa Sarma Borthakur
		03	Purnananda Saikia
		04	Achyut Saikia
		05	Dr. Mrinal Kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
MIL I ASM 101	History of Assamese Literature and Study of Assamese Culture	01	Simanta Bordoloi
		02	Achyut Saikia
		03	Achyut Saikia
		04	Dr. Mrinal kr. Gogoi
		05	Purnananda Saikia
		06	Deepa Sarma Borthakur

3rd semester

Paper code	Course title	unit	Name of the Teacher
Major III ASMM 301	Introduction to Linguistics	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Deepa Sarma Borthakur

Paper code	Course title	unit	Name of the Teacher
Major IV ASMM 302	Selection from Assamese Poetry	01	Achyut Saikia
		02	Achyut Saikia
		03	Purnananda Saikia
		04	Purnananda Saikia
		05	Purnananda Saikia

Paper code	Course title	unit	Name of the Teacher
MIL I COMMERCE ASMC 301	Modern Indian Language(Assamese	01	Purnananda Saikia
		02	Deepa Sarma Borthakur & Simanta Bordoloi
		03	Achyut Saikia
		04	Dr. Mrinal kr. Gogoi & Simanta Bordoloi

5th Semester.

Paper code	Course title	unit	Name of the Teacher
Major VII ASMM 501	Literary Theory and Creticism	01	Dr. Mrinal kr. Gogoi
		02	Dr. Mrinal kr. Gogoi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
Major VIII ASMM 502	Assamese Drama	01	Simanta Bordoloi
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Deepa Sarma Borthakur
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
Major IX ASMM 503	Cultural Studies	01	Purnananda Saikia
		02	Purnananda Saikia
		03	Purnananda Saikia
		04	Purnananda Saikia
		05	Purnananda Saikia

Paper code	Course title	unit	Name of the Teacher
Major X ASMM 504	Comparative Indian Literature	01	Achyut Saikia
		02	Achyut Saikia
		03	Achyut Saikia
		04	Achyut Saikia
		05	Achyut Saikia

DEPARTMENT OF ASSAMESE

SYLLAUS DISTREBUTION, 2017-2018(Even SEMESTER)

2nd ,4th and 6th semester(from Jan,2018 to June,2018)

2nd semester

Paper code	Course title	unit	Name of the Teacher
Major II ASMM 201	History of Assamese Literature (From the Arunodoi to Post war Period)	01	Achyut Saikia
		02	Simanta Bordoloi
		03	Purnananda Saikia
		04	Deepa Sarma Borthakur
		05	Dr. Mrinal Kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
MIL II ASM 201	Practices of Assamese Language	01	Dr. Mrinal kr. Gogoi & Achyut Saikia
		02	Achyut Saikia
		03	Purnananda Saikia
		04	Dr. Mrinal kr. Gogoi
		05	Deepa Sarma Borthakur & Simanta Bordoloi

4th semester

Paper code	Course title	unit	Name of the Teacher
Major V ASMM 401	Assamese Prose Literature	01	Achyut Saikia
		02	Purnananda Saikia
		03	Simanta Bordoloi
		04	Simanta Bordoloi
		05	Achyut Saikia

Paper code	Course title	unit	Name of the Teacher
Major VI ASMM 402	Language and Script of Assam	01	Deepa Sarma Borthakur
		02	Dr. Mrinal kr. Gogoi
		03	Deepa Sarma Borthakur
		04	Deepa Sarma Borthakur
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
MIL III NON MAJOR ASM 401	Selection from Assamese Literature	01	Purnananda Saikia
		02	Deepa Sarma Borthakur
		03	Simanta Bordoloi
		04	Achyut Saikia
		05	Dr. Mrinal kr. Gogoi

6th semester

Paper code	Course title	unit	Name of the Teacher
Major XI ASMM 601	Various aspects of Studying Language and Literature	01	Purnananda Saikia
		02	Simanta Bordoloi
		03	Simanta Bordoloi
		04	Purnananda Saikia
		05	Achyut Saikia

Paper code Major XII ASMM 602	Course title	unit	Name of the Teacher
	Indo Aryan Languages and Assamese Language	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Simanta Bordoloi
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
Major XIII ASMM 603	Linguistic Study of Assamese Language	01	Dr. Mrinal kr. Gogoi
		02	Dr. Mrinal kr. Gogoi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
Major XIV ASMM 604	Introduction to World Literature	01	Achyut Saikia
		02	Purnananda Saikia
		03	Achyut Saikia
		04	Achyut Saikia
		05	Purnananda Saikia & Achyut Saikia

DEPARTMENT OF BENGALI

Digboi College, Digboi.
Session: 2017-2018

Faculty Name	semester	Paper to Teach
	1st SEM	UNIT- 2&4
	2nd SEM	UNIT-1&3
	3rd SEM	UNIT-1,4 &5
Dipesh Mandal	4th SEM	UNIT- 2&4
	1ST SEM	UNIT- 1&3
	2nd SEM	UNIT- 2&4
Dr. Kanai Das	3rd SEM	UNIT- 2&3
	4th SEM	UNIT- 1&3

(Dipesh Mandal)

Signature of HoD

Department of Bengali.

DEPARTMENT OF CHEMISTRY

Session: June 2017-Dec 2017

Semester I (Non CBCS)	Semester III (Non CBCS)	Semester V (Non CBCS)
Paper MM-101-Physical+Inorganic+Organic	**Paper MM-301 (Inorganic Chemistry)**	**Paper MM-501 (Physical Chemistry)**
Section I- Physical Chemistry	Unit 1: NH	Unit I: NJK
	Unit 2: SB	Unit II: NJK
Unit I: NJK	Unit 3: NH	Unit III: NJK
Unit II: JD		Unit IV: JD
Unit III: JD		Unit V: JD
Section II-Inorganic Chemistry	**Paper MM-303 (Organic Chemistry)**	**Paper MM-503 (Inorganic Chemistry)**
Unit I: NH	Unit I:BS	Unit I: NH
Unit II: NH	Unit II:BS	Unit II: NH
	Unit III:BS	Unit III: NH
Section III-Organic Chemistry	Unit IV:BS	Unit IV: NH
	Unit V: BS	
Unit I: BS		
Unit II: BS		**Paper MM-505 (Organic Chemistry)**
Paper NM-101 **Inorganic + Physical + Organic**	**Paper: NM-301 (Organic Chemistry)**	Unit I: BS
		Unit II: BS
Section I-Inorganic Chemistry	Unit I: BS	Unit III: BS
	Unit II: BS	Unit IV: BS
Unit I: NH	Unit III: NJK	Unit V: BS
Unit II: NH	Unit IV: NJK	
	Unit V: BS	**Paper MM-507(Symmetry and Quantum**
Section II- Physical Chemistry		**Chemistry)**
Unit III: NJK		Unit I: NH
Unit IV: JD		Unit II: JD
Unit V: JD		Unit III: JD
Section III- Organic Chemistry		**Paper: NM 501**
		(Inorganic Chemistry +
Unit VI: BS		**Physical Chemistry**
Unit VII: BS		Unit I: NH
Unit VIII: BS		Unit II: NH
		Unit III: NH
		Second half
		Unit I: NJK
		Unit II: NJK
		Unit III : NJK
		Unit IV: JD
		Unit IV: JD
		Unit VI: JD

JD: Mrs Jonali Dutta, NH: Mrs. Neelakshi Hazarika, NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia,

DEPARTMENT OF CHEMISTRY

Course distribution

Session: Jan 2018-May 2018

Semester II (Non CBCS)	Semester IV (Non CBCS)	Semester VI (Non CBCS)
MM-201 Physical+Inorganic+Organic	**Paper MM-401 (Physical Chemistry)**	**Paper MM-601 (Physical Chemistry)**
Section I- Physical Chemistry	Unit 1: JD	Unit I: JD
	Unit 2: NJK	Unit II: JD
Unit I: NJK	Unit 3: JD+NJK	Unit III: NJK
Unit II: JD		Unit IV: NJK
		Unit V: JD
Section II-Inorganic Chemistry		
	Paper MM-403 (Organic Chemistry)	**Paper MM-603 (Inorganic Chemistry)**
Unit I: NH		
Unit II: SB	Unit I: BS	Unit I: NH
	Unit II: BS	Unit II: SB
Section III-Organic Chemistry	Unit III: BS	Unit III: NH
	Unit IV: BS	Unit IV: NH
Unit I: BS	Unit V: BS	
Unit II: BS		**Paper MM-605 (Organic Chemistry)**
Unit II: BS		
		Unit I: BS
NM-201 Inorganic Chemistry	**Paper NM-405 (Physical Chemistry)**	Unit II:BS
		Unit III:BS
Unit I: NH	Unit I: NJK	Unit IV:BS
Unit II: SB	Unit II: JD	Unit V:BS
Unit III: NH	Unit III: NJK	Unit VI:BS
Unit IV: NH	Unit IV: JD	
		Paper MM-607(Molecular Spectroscopy)
		Unit I: NH
		Unit II: SB
		Unit III: NH
		Unit IV: JD
		Unit IV: JD
		Paper NM-601 (Organic Chemistry)
		Unit I: BS
		Unit II: BS
		Unit III:BS
		Unit IV: BS
		Unit V: BS
		Unit VI: BS

JD: Mrs Jonali Dutta, NH: Mrs. Neelakshi Hazarika, NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia, SB: Swapnali Baruah

DEPARTMENT OF COMMERCE

Subject-wise Syllabus Distribution for the Academic session July-Dec, 2017

Stream/ Subjects / Name Of The Faculty	SUBJECTS																Remarks
	HS 1ST YEAR		HS 2ND YEAR		B.COM 1 SEM		B.COM 3RD SEM					B.COM 5TH SEM					
	ACCY	BST	ACCY	BST	FA	BL	ITLP	MPA	HRM	BSTAT	ECOM	MA	ENTREP	DTAX	SM	RM	
PRADIP CH. DAS	Unit-IV,V,VII,VIII		A/B/Unit-I,V,VI		Unit-IV		Unit-I,II,V							Unit-I,II,III,IV			
DR. DEBORSHEE GOGOI		Unit III, VI, VII, VIII,XI, XII		Unit I, II, III, IX, X, XI		Unit IV, V		Unit I, V	Unit II, IV, V							Unit I, II, III, IV	
SAMPREETI BORUAH	Unit-VI,IX,X		B/Unit-I,II,III,IV		Unit-I, III		Unit-III,IV			Unit-II, IV		Unit-I,II,III	Unit-III,IV				
Dr. Bikash K. Baruah	Unit-I,II,III		A/Unit-II,III,IV, V		Unit-II, V					Unit-I, V	Unit-II (half), III, V	Unit-IV	Unit-I,II				
Bhababhuti S Boruah		IV,V, IX, X		VI, VII, VIII, XII				IV	III	III					Unit I, II, III,		
Cheni Chandra Baruah		Unit I,II,		Unit IV, V,		Unit I,II,III		Unit II, III,	Unit I,	Unit-VI,	Unit I, II(half), I V				IV		

Subject-wise Syllabus Distribution for the Academic session Jan-June, 2018

Stream/ Subjects / Name Of The Faculty	SUBJECTS																		
	HS 1ST YEAR		HS 2ND YEAR		B.COM 2nd SEM		B.COM 4th SEM					B.COM 6th SEM							
	ACCY	BST	ACCY	BST	CA	CL	CA	AUD	SMKT	SAPM	CB	FSA	DT-II	RM	AM	SBM	IM	BAPP	
PRADIP CH. DAS	Unit-IV,V,VII, VIII		A/B/Unit-I,V,VI		Unit-IV		Unit - I,II,V			Unit-V		Unit-III		Unit-I,II,III,IV					
CHENI CHANDRA BORUAH		Unit III, VI, VII,		Unit I, II, III, IX, X, XI		Unit IV, V		Unit I, V	Unit II, IV, V		Unit II, IV, V					Unit I, II	I,II	I	
BHABABHUTI S BARUAH		VIII, XI, XII		VIII, XII												III		II	
SAMPREETI BORUAH	Unit-VI,IX,X		B/Unit - I,II,III,IV		Unit-I, III		Unit - III,IV			Unit-II, IV		Unit-I,II	Unit - III,IV						
RAMJANUL HAQUE	Unit-I,II,III		A/Unit - II,III,IV, V		Unit-II, V					Unit-I, III		Unit-IV	Unit-I,II						
D GOGOI		Unit I,II, IV,V, IX, X		Unit IV, V, VI, VII,		Unit I,II,III		Unit II, III, IV	Unit I, III		Unit I, III				I, II, III, IV	IV	III, IV	III, IV	

DEPARTMENT OF EDUCATION

COURSE DISTRIBUTION for 2017-18

Course –General

Class/Semester-III -

Name of the paper- Educational measurement and evaluation-302

Marks Assigned- 16 per unit

Units Assigned	**Name of the Teacher**	Remarks
III, V	**POBAN GOGOI**	
I,IV	**PRADIP DUTTA**	
II	**SNEHA GOGOI**	

Course –Honors'

Course –Major

Class/Semester-III -

Name of the paper- Educational measurement and evaluation-302

Marks Assigned- 16 per unit

Units Assigned	**Name of the Teacher**	Remarks
II, V	**POBAN GOGOI**	
I,IV	**PRADIP DUTTA**	
II	**SNEHA GOGOI**	

Class/Semester-III-Major

Name of the paper- **Educational psychology -301**

Marks Assigned- 16

Units Assigned	**Name of the Teacher**	Remarks
I,IV	**POBAN GOGOI**	
II,III	**PRADIP DUTTA**	
V	**SNEHA GOGOI**	

Course –major

Class/Semester-IV

Name of the paper-Great education and educational thought 402

Marks Assigned- 16

Units Assigned	**Name of the Teacher**	Remarks
I,V	**POBAN GOGOI**	
II,IV	**PRADIP DUTTA**	
IV, V	**SNEHA GOGOI**	

Course –major

Class/Semester-IV

Name of the paper-History of Indian education -401

Units Assigned–**growth and development of education from1900-1921**

Marks Assigned- 16

Units Assigned	**Name of the Teacher**	Remarks
I,V	**POBAN GOGOI**	
II,IV	**PRADIP DUTTA**	
III	**SNEHA GOGOI**	

DEPARTMENT OF ELECTRONICS
DIGBOI COLLEGE
Digboi - 786171
Tinsukia (Assam), India
e-mail- electronics.digboicollege@gmail.com
website:
www.digboicollege.edu.in

Ref: Date: 1/01/2018

Course Distribution
Session: Even Semester 2017-18

Faculty Name	Semester	Paper to Teach
Dr. Jayanta Handique	2nd	201G (unit- 2)
	4th	401M (Unit- All), 401G (Unit-3)
	6th	603M (All Unit), 601G (Unit-1,2), RMEG601(Unit-3, 4)
Mr. Satish Gupta	2nd	201G(Unit-4)
	4th	402M (Unit- All), 401G (Unit- 4, 6)
	6th	602M(Unit- All), 601G (Unit-3, 4), RMEG601(Unit-1,2)
Mr. Pradeep K. Khound	2nd	201M (Unit- All), 201G (Unit-1,3)
	4th	401G (Unit- 1, 2, 5)
	6th	601M(Unit- All)

Session: Odd Semester 2017-18

Faculty Name	Semester	Paper to Teach
Dr. Jayanta Handique	1st	101M (All Unit) , 101G (unit- 2, 6)
	3rd	301G (Unit- 1,4)
	5th	501M (All Unit), 501G (Unit-4), RMEG501(Unit-1, 2, 4)
Mr. Satish Gupta	1st	101G(Unit-3,5)
	3rd	302M (Unit- All), 301G (Unit- 5, 6)
	5th	503M(Unit- All), 501G (Unit-3, 5), RMEG501(Unit-3,5)
Mr. Pradeep K. Khound	1st	101G (unit- 1,4)
	3rd	301M (Unit- All), 301G (Unit- 2, 3)
	5th	502M(Unit- All), 501G (Unit-1, 2)

Dept of English: Distribution of syllabus (June-Dec, 2017)

HS1 (A/S/C)

Unit-I:Comprehension:SD/PB/PB
Unit-II:Writing skills:SD/PB/PB
Unit-III: Grammar:SD/PB/PB
Unit-IV: a)Portrait, Landscape
Photograph, voice, Ranga:CC/BRP/BRP
b)Ailing, Impression
Childhood, Father, Einstein:JD/GB/GB

HS1 AltE

Unit-I: Suitor, Rule-SD: Many-JD
Box-CC
Unit-II: Daffodils-SD: Once-JD
Autumn, Listeners-CC
Unit-III: Grammar-CC
Unit-IV: Composition: JD

HS2 (A/S/C)

Unit-I:Reading skills:PB/SD
Unit-II:Writing skills:PB/SD
Unit-III: Grammar:PB/SD
Unit-IV: a)Last, Lost, Indigo,
Mother,Tiger,Journey- BRP/CC
b) Going, Memoirs, Keeping, Beauty,
Roadside, Face, Memories-GB/JD

HS2 AltE

Unit-I: Verger-BRP; Philosopher-GB JD
Testament, Gift-PB
Unit-II: Brook,Ozymandias-BRP
Village, La Belle-PB
Unit-III &IV: Grammar, Composition-GB

Semester 1: Gen. Eng (GrA/GrB/Sc)

Unit-I: Comprehension-GB/CC/CC
Precis-BRP/SD/BRP
Unit II: Letter-PB/JD/PB
Unit-III: Note, Memo-BRP/SD/BRP
Unit-IV: Paragraph, Report-GB/CC/CC
Unit-V:Transcoding-PB/JD/PB

Semester 1: Alt. Eng

Unit-I:CC
Unit-II:SD
Unit-III:JD
Unit-IV: Breaded-SD: Introduction-CC
Frogs-JD

Whitman - Song of Myself
Pound - The River Merchent's Wife A Letter.
Langston Hughes Necessity; I, too, Sing America

Semester I:Business Comm I

Unit I- GB
Unit II- JD
Unit III-JD
Unit IV- SD

BA 3: Gen. English)

Unit-I:Wordsworth,Frost,Eliot, Ezekiel-GB
Unit II- Hughes,Heaney,Nichols,Walcot-PB
Unit III- Chekhov-BRP

BA 3: Commn Skills

Unit I- Essay-CC
Unit II- Conversational Eng-JD
Unit III- Common Mistakes-SD
Unit-IV-a)Grammar in Comm, synonyms, antonyms, one-word substitutes-CC
b)Framing sentence, word order-SD

B.Com AltE

Unit I- Letter-BRP; Essay-GB
Unit II- Report-JD; Transcoding-SD
Memo-CC
Unit III- Aurobindo-GB; Krishnamurthy-BRP
Ray-SD
Unit-IV-Coetzee-JD;Naipaul-PB;Ghosh-CC

1st Semester Major:

Unit I- Anglo-Saxon-JD
Unit II-Chaucer-BRP
Unit III-Renaissance- CC
Unit IV- Puritan-SD
Unit V- Restoration-GB

3rd Semester Major:301

Unit I- SD; Unit II- PB; Unit III-BRP

3rd Semester Major:302

Unit I-Shakespeare, Donne, Herbert-CC
Unit II- Paradise Lost-GB
Unit III-Wordsworth, Keats-CC
Unit IV-Browning, Arnold-JD
Unit V-Yeats, Eliot-JD

5th Sem Major:

BRP-King, Preface,: GB-Poetics, Machievalli, Lock
PB-Sublime,Rousseau, Indian poetry;
JD- Marx, Heaven: SD- Godot,Apology;
CC-Pygmalion,Kanthapura.

Dept. of English: Digboi College
Syllabus Distribution of Even Semester Classes (Jan-June, 2018)

HS1 (A/S/C)

Unit-I:Comprehension:SD/PB/PB
Unit-II:Writing skills:SD/PB/PB
Unit-III: Grammar:SD/PB/PB
Unit-IV: a)Portrait, Landscape
Photograph, voice, Ranga:CC/BRP/BRP
b)Ailing, Impression
Childhood, Father, Einstein:JD/GB/GB
CONVERSATION SKILL- ALL TEACHERS

HS1 AltE

Unit-I: Suitor, Rule-SD: Many-JD
Box-CC
Unit-II: Daffodils-SD: Once-JD
Autumn, Listeners-CC
Unit-III: Grammar-CC
Unit-IV: Composition: JD

Semester II Arts: Gen. Eng (Gr A+Sc)/Gr B

Unit-I: Last Leaf- CC/PB
Banyan Tree- SD/BRP
China- JD/GB
Unit II: Tawang-JD/GB
Gandhi- CC/PB
Universe- SD/BRP

Semester II Commerce:Business Comm II

Unit I- JD
Unit II- CC
Unit III-BRP
Unit IV- JD

Semester II (Alternative English)

Unit I- Secret; Original thinking - GB
Unit II- Film; Playground- JD
Unit III- Beginnings –BRP;
Books-SD
Unit IV- Appreciation -BRP

Semester IV (Alternative English)

Unit I- Oldman-SD
Unit II- Wife's -CC; Javni-BRP
Unit III- Toba-GB, Kunti –PB

2nd Semester Major:

Unit I- SD
Unit II- JD
Unit III- CC
Unit IV & V- } Theory, Poetry, Drama-PB
Fiction-GB

4th Semester Major

Paper- 401

Unit I- Studies; Roger-PB
Unit II- Superannuated; Politics-PB
Unit III-Joseph- JD
Unit IV- Mansfield-BRP

Paper- 402

Unit I-Sociopolitical contexts- SD+GB+CC
Unit II- Two cities-SD
Unit III-Wuthering- GB
Unit IV-Sons- CC

6th SEMESTER Major

Paper 601: Unit-I- Preface (20) - SD
Unit-II- Biographia (20)- CC
Unit-III- Study of poetry (20)- JD
Unit-IV-Tradition, Meaning (20)-JD

Paper XII:Unit-I-History 15 Marks- CC
Unit-II-Huckfinn 20 Marks- GB
Unit-III-Desire 20 Marks- JD
Unit-IV-poetry all 25 Marks- CC

Paper XIII: Unit-I-Concepts 20 Marks- PB
Unit-II-Colonialist 20 Marks-PB
Unit-III-Shadow 20 Marks- BRP
Unit-IV-Disgrace 20 Marks- BRP

Paper XIV: Unit-I-30 Marks- SD
Unit-II-30 Marks- PB
Unit- III-20 Marks- GB

01.01.2018

DEPARTMENT OF HINDI

Course Distribution for the Session (May – November) 2018,

COURSE / UNIT	Dr. P K BHARATI	Dr. (Mrs.) A K SAHU
H.S.-I- MIL	Unit-I Apathit Bodh, Unit -III Gadya Khand & Vitan -1,	Unit -III Kavya Khand, Unit -II Rachanatmak Lekhan, Unit -IV-Moukhik Prikshan
H.S.-II –MIL	Unit -I Apathit Bodh, Unit -III Kavya Khand,	Unit -II Rachanatmak Lekhan or Jansanchar, Unit -III Gadya Khand & Vitan-2,
Sem.- I MIL	Unit -I Prachin & Madhya Kavya, Unit -II Aadhunik Kavya,	Unit – III Dhruvaswamini, (Novel) Unit - IV Jivan our Sahitya.
Sem.-I (Major)	Unit -II Poorv Madhya Kaal (Bhakti Kaal)1, Unit- III Poorv Madhya Kaal (Bhakti Kaal)2,	Unit- I Aadi Kaal, Unit- IV Aadhunik Kaal ,
Sem.-III (Elec.)	Unit-I Karyalayee Hindi, Unit-IV Patra Lekhan, Aalekhan & Tippan,	Unit- II Pallavan, Unit- III Anuvad,
Sem.-III MIL (Com.)	Unit -II Vigyapan, Unit -III Karyalayee Hindi,	Unit -I Gadya Katha Sansar, Unit-IV Anuvad
Sem. V (Elec.)	Unit-II Bharopiya Parivar, Prachin Bharatiya Arya Bhasha, Unit-III Aadhunik Bhartiya Arya Bhasha,	Unit- I Bhasha our Bhasha Vigyan, Unit- IV Devnagari Lipi, Lipi ka Manak Roop,

HOD (HINDI)
DIGBOI COLLEGE, DIGBOI

Course Distribution for the Session (January- May) 2019

Department of Hindi, Digboi College, Digboi.

COURSE / UNIT	Dr. P K BHARATI	Dr. (Mrs.) A K SAHU
H.S.-I- MIL Hindi	Unit -II Rachanatmak Lekhan, Unit-III Gadya Khand Unit -IV-Moukhik Prikshan,	Unit-I Apathit Bodh, Unit -III Kavya Khand & Vittan -1 ,
H.S.-I-Adv. Hindi	Unit -I Old Poetry, Unit –II Modern Poetry	Unit -III Kahani, Unit -IV-Nibandh, Unit –V History of Hindi Literature
Sem.-II –MIL Hindi	Unit -I Gadya Katha Aalok, Unit -IV Nibandh,	Unit -II Kali Aandhi, (Novel) Unit -III Vyakaran our Rachana,
Sem.-II Hindi (Major)	Unit -I Vidyapati, Surdas, Unit –II Kabirdas,	Unit - III Jayasi- Nagmati Virah Prasang, Unit – IV Bihari & Dev ,
Sem.- IV- MIL Hindi	Unit -I Vyavaharik Hindi, Unit -III Patra Lekhan,	Unit – II Anuvad, Unit - IV Sankshepan,
Sem.-IV- Elec. Hindi	Unit -III Asamiya Sahitya ka Parichayatmak Itihas, Unit- IV Vaishnavyug, Aadhunikyug,	Unit- I Aadikal, Bhaktikal, Rittikal, Aadhunikkal, Unit- II Chhayavad, Prayogvad, Pragativad, Nai Kavita,Upanyas, Kahani, Natak, Ekanki,
Sem.-VI- Elec. Hindi	Unit- I Alochana Ka Swaroop, Unit- II Hindi Alochana - Shukla & Dwevedi,	Unit-III Jan Sanchar Madhyam, Unit-IV Sanchar Madhyam Ke Vividh Roop,

HOD (HINDI)

DIGBOI COLLEGE, DIGBOI

Course Distribution: Digboi College, Deptt. of Mathematics, Session June-December, 2017-18), wef 16.06.2017

HS I Math	Sets & Functions	JC	**CMS I**	Unit I	MB
	Calculus	JC		Unit II	MB
	Algebra	MB		Unit III	JC
	Trigonometry	JL		Unit IV	KN
	C0-ordinate Geometry	JL		Unit V	JC
	Statistics	AD		Unit VI	JC
	Probability	KN		UnitVII	KN
	Mathematical Reasoning	AD		Unit VIII	MB
HS II	UNIT I	KN	**CMS II**	UNIT I	KN
	UNIT II	KN		UNIT II	JL
	UNIT III	MB		UNIT III	KN
	UNIT IV	JL		UNIT IV	JL
	UNIT V	JL		UNIT V	JL
	UNIT VI	JC		UNIT VI 6.1	KN
				UNIT VI 6.2	JL
SEM I (M)	(A) Unit I-Real Sequences	AD	**SEM I (P)**	(A) Unit I-Real Sequences	AD
	UNIT II-Infinite Series	KN		UNIT II-Infinite Series	KN
	UNIT III -Theory of Equations	JC		UNIT III -Theory of Equations	JC
	(B) Trigonometry	MB		(B) Trigonometry	MB
	© Vector Calculus	JL		(C) Vector Calculus	JL
SEM III (M)	**Paper-MM301**		**SEM III(P)**	(A) 2D	JC
	(A) Differential Calculus			(A) 3D	AD
	UNIT I & II	MB		(B) Analysis I	
	UNIT III	KN		UNIT-I & II	MB
	UNIT IV	JL		UNIT- III & IV	KN
	(B) Integral Calculus	KN			
	(C) Riemann Integral	AD			
	Paper-MM302				
	(A) Co-ordinate Geometry				
	2D	JC			
	3D	AD			
	(B) Algebra -I				
	UNIT- I	KN			
	UNIT-II	MB			
SEM V(M)	**Paper-MM501**		**SEM V(P)**	Analysis-II	
	Logic & Combinatories	JC		(Complex Analysis)	JC
	Complex Analysis	JC		Mechanics	
	Paper-MM502			Statics	AD
	Linear Algebra	MB		Dynamics	KN
	Number Theory	MB			
	Paper-MM503				
	Fluid Mechanics	JL			
	Paper-MM504				
	Statics	AD			
	Dynamics	KN			
	Integral Transform	AD			

1. DR. A.C.DEKA(AD)
2. PROF. K.N. TIMSINA(KN)
3. DR. J. CHANGMAI(JC)
4. DR. J. LAHKAR(JL)
5. PROF. M. BURAGOHAIN(MB)

Dr. J. Changmai
HoD, Maths

Course Distribution:: Dept. of Mathematics, Digboi College, Session January_May, 2018:: Even Sem & HS, wef 02.01.2018

Class	Subject	Teacher	Marks	Class	Units	Teacher	Marks
HS I Math	Sets & Functions	JC		**CMS I**	Unit I	MB	
	Calculus	JC			Unit II	MB	
	Algebra	MB			Unit III	JC	
	Trigonometry	JL			Unit IV	KN	
	C0-ordinate Geometry	JL			Unit V	JC	
	Statistics	AD			Unit VI	JC	
	Probability	KN			UnitVII	KN	
	Mathematical Reasoning	AD			Unit VIII	MB	
SEM II (M)	COURSE CODE:MM201			**SEM II (P)**	COURSE CODE:NM201		
	(A) Marices	KN	20		(A) Marices	KN	20
	(B) Ordinary Differential Equatic	MB	30		(B) Ordinary Differential Eq	MB	30
	(C) Numerical Analysis	AD	30		(C) Numerical Analysis	AD	30
SEM IV (M)	**COURSE CODE:-MM401**			**SEM IV(P)**	**COURSE CODE:-NM401**		
	(A)C-PROGRAMMING	JL	50		(A) Linear Prog . Problem	JL	50
	(B) COMPUTER LAB	JL	30		(B) COMPUTER LAB	JL	30
	(C-Programming, Matlab)				(Matlab, Mathematica)		
	COURSE CODE:-MM402						
	(A) Linear Prog. Problem	JL	45				
	(B) Analysis -II(Multiple Integral)	AD	35				
SEM VI(M)	**Paper-MM601**			**SEM VI(P)**	Group B		
	(A)Metric Space	KT	40		a) Discrete Mathematics	JC	40
	(B)Statistics	JC	40		b) Metric Space	KN	40
	Paper-MM602						
	(A) Discrete mathematics	JC	45				
	(B) Graph Theory	MB	35				
	Paper-MM603						
	(A) Algebra II	MB	40				
	(B) Partial Differential Equation	JK	40				
	Paper-MM604(GR.B)						
	(A) Space Dynamics	KT	40				
	(B) Relativity	JL	40				

1. DR. A.C.DEKA(AD)
2. PROF. K.N. TIMSINA(KN)
3. DR. J. CHANGMAI(JC)
4. DR. J. LAHKAR(JL)
5. PROF. M. BURAGOHAIN(MB)

Jchymai

Dr. J. Changmai
HoD, Maths

DEPARTMENT OF PHILOSOPHY

COURSE DISTRIBUTION *SESSION: 2017—18 (I)*

Dr. I. DAS: I SEM. (M), 101 (INDIAN PHILOSOPHY-I),FULL PAPER
V SEM. (p), 501 (INDIAN & WESTERN LOGIC), UNIT: I,III & V
V SEM. (M), 502 (WESTERN LOGIC), FULL PAPER
V SEM. (M), 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: I & II
H.S-I, UNIT: I & II
H.S-II, UNIT I & III

Mr. B. NARZARY: III SEM. (M), 301 (WESTERN PHILOSOPHY), FULL PAPER
III SEM. (P), 301(INDIAN PHILOSOPHY-II), UNIT: I, II & IV
V SEM. (M), 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: II & III
V SEM. (M), 504 (PHILOSOPHY OF RELIGION), FULL PAPER
H.S –I, UNIT: VII & VIII
H.S- II, UNIT: VII & VIII

Dr. R. SARMAH: I SEM. (P), 101 (INDIAN PHILOSOPHY-I), FULL PAPER
III SEM. (M), 301 (INDIAN PHILOSOPHY-II), FULL PAPER
V SEM. (M), 501 (INDIAN LOGIC), FULL PAPER
V SEM. (M), 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: IV
H.S-I, UNIT: V & VI
H.S-II, UNIT: V & VI

Mr. D. RIMAL: III SEM. (P), 301 (INDIAN PHILOSOPHY-II), UNIT: III, IV & V
V SEM. 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: V
V SEM. (P), 501 (INDIAN AND WESTERN LOGIC), IV & V
H.S-I, UNIT: III &IV
H.S-II, UNIT: II & IV

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DEPARTMENT OF PHILOSOPHY

COURSE DISTRIBUTION *SESSION: 2017—18 (II)*

Sl. No.	Name	Course allotted	No. of class allotted (weekly)	Remarks
1	**Dr. Itu Das**	(a) M-401(Indian Ethics, Full P) (b) M-604(Psychology Full P) (c) M-603(Social and Political Philosophy, Unit: I & II) (d) NM-601(Social Philosophy & Psychology, Unit: I, II & III) (e) HS-I(unit: I & II)	06 06 02 03 01	
2	**Mr. Bisti Ram Narzary**	(a) NM-201(Western Philosophy, Unit: I,II & III) (b) M-402(Western Ethics Full P) (c) M-602(Contemporary Western Philosophy Full P) (d) M-603(Social and Political Philosophy, Unit: III & IV) (e) HS-I(Unit: VII & VIII)	03 06 06 02 01	
3	**Dr. Reepa Sarmah**	(a) M-201(Western Philosophy, Full P) (b) NM-401(Western Philosophy-II, Unit: I II & III) (c) M-601(Contemporary Indian Philosophy, Full P) (d) M-603(Social and Political Philosophy, Unit: IV & V) (e) HS-I(Unit: V & VI)	06 03 06 02 01	
4	**Mr.Dipendra Rimal**	(a) NM-201(Western Philosophy-I, Unit: III, IV & V) (b) NM-401(Western Philosophy-II, Unit: III, IV & V) (c) NM-601(Social Philosophy & Psychology, Unit: III, IV & V) (d) HS-I(Unit: III & IV)	03 03 03 03	

1. Dr. Itu Das

2. Mr. Bisti Ram Narzary

3. Dr. Reepa Sarmah

4. Mr. Dipendra Rimal

Department of Physics, Digboi College

Course Distribution

From July to December 2017

(Odd Semester)

B. SC. 1st SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 101	Mechanics and Properties of Matter	Dr P Basyach Dr K Konwar

B. SC. 1st SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 101	Mechanics and Thermodynamics	Dr P Basyach Dr K Konwar

B. SC. 3rd SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 301	Optics	Dr R Patowary
PHYM - 302	Electricity & Magnetism	Dr K Konwar Dr P Basyach
PHYM - 303	Laboratory	Dr K Konwar Dr P Basyach

B. SC. 3rd SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 301	Electricity, Magnetism and Electromagnetic Theory	Dr K Konwar Dr P Basyach

B. SC. 5th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 501	Mathematical Physics II	Dr R Patowary
PHYM - 502	Electrodynamics & Special Relativity	Dr P Basyach
PHYM - 503	Atomic & Molecular Physics	Dr N Gogoi
PHYM - 504	Electronics	Dr K Konwar
PHYM - 505	Laboratory	Dr K Konwar

B. SC. 5th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 501	Atomic and Nuclear Physics	Dr R Patowary

M. SC. 1st SEMESTER (NCBCS) (2nd Batch)

Paper Code	Title	Name of Faculty
PH-10100	Mathematical Physics	Dr R Patowary
PH-10200	Classical Mechanics	Dr K Konwar
PH-10300	Quantum Mechanics - I	Dr N Gogoi
PH-10400	Electrodynamics and Fluid Dynamics	Dr P Basyach
PH-10500	Laboratory	Dr K Konwar

M. SC. 3rd SEMESTER (NCBCS) (1st Batch, Started on June 2016)

Paper Code	Title	Name of Faculty
PH-30100	Atomic and Molecular Physics	Dr K Konwar
PH-30200	Computational Physics	Jyoti Dey
PH-30300	Nano Structured Material	Dr P Basyach
PH-30400	Vacuum Techniques	Ganesh Debnath
PH-30530	Digital Electronics	Dr K Konwar Satish Gupta
PH-30540	Condensed Matter Physics: Electronic Properties of Solids	Dr N Gogoi
PH-30610	Laboratory Condensed Matter Physics-I	Dr N Gogoi
PH-30610	Laboratory Electronics-I:	Dr K Konwar

Department of Physics, Digboi College
Course Distribution
From January to June 2018
(Even Semester)

B. SC. 2nd SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 201	Thermal Physics & Waves and Oscillation	Dr P Basyach Dr K Konwar

B. SC. 2nd SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 201	Optics	Dr R Patowary
PHYG - 202	Practical-I	Dr K Konwar

B. SC. 4th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 401	Mathematical Physics I	Dr K Konwar
PHYM - 402	Quantum Mechanics	Dr P Basyach Dr K Konwar
PHYM - 403	Laboratory	Dr P Basyach Dr K Konwar

B. SC. 4th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 401	Quantum Mechanics & Mathematical Physics	Dr P Basyach Dr N Gogoi
PHYG - 402	Practical-II	Dr N Gogoi

B. SC. 6th SEMESTER (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 601	Statistical Mechanics	Dr P Basyach
PHYM - 602	Condensed Matter Physics	Dr N Gogoi
PHYM - 603	Nuclear Physics	Dr R Patowary
PHYM - 604	Laser and its Application	Dr K Konwar
PHYM - 605	Laboratory	Dr K Konwar Dr P Basyach

B. SC. 6th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 601	Electronics & Solid state Physics	Ganesh Debnath
PHYG - 602	Practical -III	Ganesh Debnath

M. SC. 2nd SEMESTER (NCBCS) (2nd Batch)

Paper Code	Title	Name of Faculty
PH-20100	Quantum Mechanics II	Dr N Gogoi
PH-20200	Nuclear and Particle Physics	Dr R Patowary
PH-20300	Condensed Matter Physics	Dr P Basyach
PH-20400	Electronics	Dr K Konwar
PH-20500	Laboratory	Dr K Konwar Dr P basyach

M. SC. 4th SEMESTER (NCBCS) (1st Batch, Started on June 2016)

Paper Code	Title	Name of Faculty
PH-40100	Statistical Mechanics	Dr P Basyach
PH-40200	Plasma Physics	Dr R Patowary
PH-40300	Meteorology	Dr R Patowary
PH-40400	Observational Astronomy	Ganesh Debnath
PH-40530	Communication Electronics	Dr K Konwar
PH-40540	Condensed Matter Physics: Lattice Vibrations and Semiconductor Physics	Dr N Gogoi
PH-40610	Laboratory Condensed Matter Physics-II	Dr N Gogoi
PH-40610	Laboratory Electronics-II	Dr K Konwar

DEPARTMENT OF ZOOLOGY

COURSE DISTRIBUTION OF SEMESTER I, III and V (MAJOR & GENERAL) for the Academic Session 2017-18

SAIBAL DEV, ASSOC. PROF

PAPER : ZOOMT:101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION

MARKS: 12 IA+ 48 = 60

UNIT -1: PROTOZOA – General characters and classification upto orders with examples; Locomotion, nutrition and reproduction in Protozoa.

UNIT-2: HELMINTHES – General characters and classification upto orders with examples

UNIT-5: Modern concept in Taxonomy (Molecular, Chemotaxonomy).

ZOOMP : 102 MARKS : 8 IA + 32 =40

1. Dissection of digestive and nervous system of cockroach.
2. Identification of laboratory specimens as per syllabus
3. Preparation of permanent slides & mounting of minimum five suitable non-chordate specimens & their submission

SEMESTER I GENERAL

ZOOGT : 101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION

MARKS: 12 IA+ 48 = 60

UNIT -1: PROTOZOA: Locomotion, nutrition and reproduction in Paramoecium and Leishmania

UNIT -2: Platyhelminthes & Nenathelminthes : Life cycle of Ascaris and Taenia, Reproduction and Parasitic adaptation.

UNIT –5: Concept of species & speciation; Origin of life on earth.

ZOOGP : 102 MARKS : 8 IA + 32 =40

1. Dissection of digestive and nervous system of cockroach.
2. Identification of laboratory specimens as per syllabus
3. Preparation of permanent slides from suitable non-chordate specimens

SEMESTER III MAJOR

ZooMT : 301 CHORDATE DIVERSITY AND COMPARATIVE ANATOMY 12(IA)+48=60

UNIT -1: (Entire) General characters of chordates ----- to ---- affinities of protochordates.

UNIT -5: Comparative anatomy of pectoral and pelvic girdles of tetrapoda ; comparative account of alimentary system in reptiles, birds and mammals.

ZooMP : 302 (PRACTICAL) 8(IA)+32=40

1.DISSECTION- Efferent branchial system of Scoliodon.

2. IDENTIFICATION – Vertebrate specimens

3. PREPARATION OF PERMANENT SLIDES –Vertebrate exoskeletons – feather, scales etc.

4. STUDY OF BONES- Pectoral and Pelvic girdles of Amphibia.

ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS 12(IA)+48=60

UNIT-5: Measures of statistical average ---- to --- Significance test (t, F and chi-square test).

ZooM-304 (PRACTICAL) 8(IA)+32=40

1.Separation of chlorophyll by paper chromatography.

2.Statistical calculations – central tendency, deviations, correlation, regression & t test.

SEMESTER III GENERAL :

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY 12(IA)+48=60

UNIT-1: General characters of chordates; Protochordates; classification up to orders, structural organization of Hemichordates, Urochordates.

UNIT-4: Fertilization – types and mechanism ; Parthenogenesis.

ZooGP – 302 (PRACTICAL) 8(IA)+32=40

1.DISSECTION – External morphology, Efferent branchial system of Scoliodon.

2.IDENTIFICATION – Vertebrate specimens.

3. PRPARATION OF PERMANENT SLIDES

4. STUDY OF CHICK EMBRYO DEVELOPMENT UPTO 72 HOURS BY PERMANENT SLIDES.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION 12(IA)+48=60

UNIT -2: Determination of sex, Sex linked inheritance, Cytoplasmic Inheritance.

UNIT -4: Origin of life (chemical & biological origin) ---- to ---- fossil and fossilization.

ZooMP – 502 PRACTICAL 8(IA)+32=40

1.Study of materials/ organisms of evolutionary significance (Rocks, Fossil and Connecting links).

ZooMT -503 ANIMAL PHYSIOLOGY 12(IA)+48=60

UNIT -2: (Entire) Digestion – site and sequence of digestion ----- to ---- balanced diet.

UNIT -3: (Entire) Excretion – structure and function of nephron --- to ---- dialysis.

ZooMP – 504 PRACTICAL 8(IA)+32=40

1.Qualitative test of salivary amylase.

2.RBC and WBC counting by haemocytometer.

ZooMT- 505 ENVIRONMENTAL BIOLOGY AND WILDLIFE 12(IA)+48=60UNIT-3: Biogeochemical cycles – phosphorus & hydrological cycles.

UNIT-5: IUCN status of species category; important endamgered species of N.E. India – Dancing deer, river dolphin, pigmy hog, white winged wood duck, golden mahaseer.

ZooMP – 506 PRACTICAL 8(IA)+32=40

1.Determination of dissolved oxygen / alkalinity in the water samples.

2.Field study

3. Project Work (Project topics should be discussed and distributed among faculty members)

ZooMT – 507 : ENDOCRINOLOGY 12(IA)+48=60

UNIT -1: Comparative anatomy of pancreas in Fish, Amphibia, Birds and Mammals.

UNIT 3: (Entire) General characters of hormones --- to --- hypo & hypersecretion of hormones.

ZooMP – 508 PRACTICAL 8(IA)+32=40

1. Histological preparation of thyroid gland.
2. Study of permanent slides of endocrine glands.

SEMESTER V GENERAL

ZooGT- 501 : GENETICS AND MOLECULAR BIOLOGY 12(IA)+48=60

UNIT- 4: Concept of central dogma, genetic code, basic steps of transcription and translation

ZooGP – 502 PRACTICAL 8(IA)+32=40

1. Preparation of nucleotides using ball and stick model.

2.Preparation of slides of meiosis using suitable material.

RAJIB RUDRA TARIANG, ASST. PROF.

SEMESTER I MAJOR

ZOOMT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION

MARKS : 12IA + 48=60

UNIT-1: PORIFERA : General characters and classification upto orders with examples; Skeletal and Canal systems in Sycon. COELENTERATA : General characters and classification upto orders with examples; Polymorphism and Defensive mechanism in coelenterate, Coral reefs and their formation.

UNIT-5: Modern concept in Taxonomy (Numerical & Cytotaxonomy)

ZOOMP:102 MARKS: 8IA + 32=40

1. Dissection –Nervous system of Pila / Acatina , Reproductive system of cockroach
2. Identificatiopn of Invertebrate specimens as per the syllabus.
3. Study of Morphotaxonomy of locally available animals.

SEMESTER I GENERAL

ZOOGT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION

MARKS : 12IA + 48= 60

UNIT-1: NON-CHORDATES – Salient features and classification upto classes of different phyla.

UNIT-2: PORIFERA & COELENTERATA – Canal system in Porifera; Coral and coral reefs.

UNIT-5: Variation, mutation, recombination, isolation and natural selection, adaptive radiation.

ZOOGP: 102 MARKS: 8IA + 32=40

1. Dissection – digestivesystem of Pila/Acatina
2. Identification of Invertebrate specimens
3. Preparation of permanent slides of suitable invertebrate animals.

SEMESTER III MAJOR

ZooMT – 301: CHORDATE DIVERSITY AND COMPARATIVE ANATOMY 12(IA)+48=60

UNIT- 2: (Entire)- Distinctive characters of Petromyzontia --- to --- parental care in fish.

UNIT - 3: Distinctive characters and classification of Reptilia upto order with example --- to ---- biting mechanisms of poisonous snakes.

ZooMP- 302 PRACTICAL 8(IA)+32=40

1. DISSECTION – Internal ear of Scoliodon.
2. IDENTIFICATION
3. DEMONSTRATION OF Digestive , Circulatory and Respiratory and Urinogenital systems of Reptiles, Birds & Mammals through electronic media.

ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS 12(IA)+48=60

UNIT -2: (Entire) Microscopy ----

UNIT-4: Principles and practices of centrifugation; autoradiography.

ZooM-304 (PRACTICAL) 8(IA)+32=40

1. Demonstration of instruments as prescribed in the syllabus.

SEMESTER III GENERAL

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY 12(IA)+48=60

UNIT-2: Reptilia : Classification upto orders --- to --- Biting mechanism.

UNIT-3: Mammalia: Classification upto orders; dentition in mammals.

UNIT-5: Extra embryonic membranes; types and physiology of placenta.

ZooGP : 302 PRACTICAL 8(IA)+32=40

1.DISSECTION – Internal ear of Scoliodon

2.IDENTIFICATION – Vertebrate specimens

3.Study of Chick embryo upto 72 hrs of development by permanent slides.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION 12(IA)+48=60

UNIT -4: Evidences of theories of evolution - - - to - - - Modern synthetic theory.

UNIT-5: Concept of population - - - to - - gene frequency (Genetic drift, gene flow, genetic load).

ZooMP- 502 PRACTICAL 8(IA)+32=40

1.Polytene chromosome of Chironomus or Drosophila larvae.

ZooMT- 503 ANIMAL PHYSIOLOGY 12(IA)+48=60

UNIT- 5: (Entire) Nervous system – neurons --- -- to --- - social implications.

ZooMP- 504 PRACTICAL 8(IA)+32=40

1. Demonstration of knee-jerk reflex
2. Demonstration of osmosis using toad/frog urinary/ alimentary canal.

ZooMT- 505 ENVIRONMENTAL BIOLOGY & WILDLIFE 12(IA)+32=40

UNIT-3: Biogeochemical cycles – carbon & nitrogen cycles; Basic concept of remote sensing and EIA.

UNIT-4: Environmental pollution (Air & soil),

UNIT-5: Major National Parks of N.E.India - - - to - - Wildlife Protection Act, 1972.

ZooMP-506 PRACTICAL 8(IA)+32=40

1.Estimation of size of population by capture recapture method.

2. Study of structural components of an aquatic / grassland ecosystem.

3. Field study

4. Project Work (Project topics should be discussed and distributed among faculty members).

ZooMT-507: **ENDOCRINOLOGY** 12(IA)+48=60

UNIT-1: Comparative anatomy of Adrenal gland of fish, amphibian, bird and mammals.

UNIT-2: (Entire) Hormones secreted by endocrine glands .....

ZooMP-508 PRACTICAL 8(IA)+32=40

1.Histological preparation of adrenal gland .

2.Dissect and display thyroid gland in fish/rat.

SEMESTER V GENERAL

ZooGT- 501 : GENETICS AND MOLECULAR BIOLOGY 12(IA)+48=60

UNIT-3: (Entire) Nucleic acids .....

UNIT-5: Genetic engineering, Restriction enzymes.

ZooGP-502 PRACTICAL 8(IA)+32=40

1.Preparation of slides for study of mitosis and meiosis using suitable material

KISHOR HALOI, ASSTT. PROF

ZOOMT:101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION

MARKS: 12 IA+ 48 = 60

UNIT-2: ANNELIDA : General characters and classification upto orders with examples; Excretion, Reproduction and importance of Pheretima; Coelom and Metamerism in Annelids.

UNIT-3: ARTHROPODA: General characters and classification upto orders with examples; Mouth parts of insects; Larval forms in crustaceaa; Digestion, excretion & vision in Arthropoda; Affinity of Onychophora.

UNIT-5: SYSTEMATICS: Nomenclature – rules of Zoological nomenclature.

ZOOMP: 102 MARKS: 8IA+32=40

1. Dissection of Urinogenital system of earthworm
2. Identification of Invertebrate laboratory specimens

SEMESTER I GENERAL

ZOOGT : 101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION

MARKS: 12 IA+ 48 = 60

UNIT-3: ANNELIDA: Coelom & excretion in Annelida; ARTHROPODA: Mouth parts & legs in insects; crustacean larval forms, social life in honey bee.

UNIT-5: Concept of evolution, evolutionary theories.

ZOOGP: 102 MARKS: 8IA+32=40

1. Dissection of urinogenital system of leech
2. Identification of Invertebrate laboratory specimens
3. Preparation of permanent slides from suitable invertebrate animal.

SEMESTER III MAJOR

ZooMT – 301: **CHORDATE DIVERSITY AND COMPARATIVE ANATOMY** 12(IA)+48=60

UNIT-4: General characters & classification of Aves - - - to - - - migration in birds.

UNIT-5: Comparative anatomy of integument of fish, reptile and mammals. Comparative anatomy of brain & cranial nerves in amphibia and mammals.

ZooMP - 302 PRACTICAL 8(IA)+32=40

1.Dissection – Weberian ossicles of carp /catfish
2.Identification of vertebrate specimens.
3.Preparation of permanent slides.
4. Study of vertebral columns of mammals; pectoral pelvic girdles of reptiles.

ZooMT – 303 : **BIOINSTRUMENTATION & BIOSTATISTICS** 12(IA)+48=60

UNIT-3: Photometry – principle and uses of colorimeter & spectrophotometer.

UNIT-4: Principles and uses of kymography, microtomy and ultramicrotomy. **ZooMT – ZooMP-304** PRACTICAL 8(IA)+32=40

1.Separation of chlorophyll by paper chromatography.
2.Demonstration of instruments as prescribed in the syllabus.

SEMESTER III GENERAL

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY 12(IA)+48=60

UNIT-3: Aves – classification up to super-orders - - - to - - - bird migration.

UNIT-4: Gametogenesis – spermatogenesis, types of animal eggs, vitellogenesis, egg membranes.

ZooGP : 303 PRACTICAL 8(IA)+32=40

1.Dissection- Efferent branchial system of Carp fish

2.Preparation of permanent slides of suitable vertebrate material.

3. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION 12(IA)+48=60

UNIT-2: Linkage --- to --- gene mapping.

UNIT-3: (Entire) Concept of gene --- to ---- Human genome project.

ZooMP-502 PRACTICAL 8(IA)+32=40

1.Study of chromosomal slides of suitable material.

ZooMT-503 ANIMAL PHYSIOLOGY 12(IA)+48=60

UNIT-4: (Entire) Circulation – coronary circulation ---- to ---- tracheal respiration in insects.

ZooMP-504 PRACTICAL 8(IA)+32=40

1.Determination of R. Q. Of cockroach/Goroi fish

2.Preparation of haemin crystal

3.R.B.C. and W.B.C. counting by haemocytometer.

ZooMT- 505 ENVIRONMENTAL BIOLOGY AND WILDLIFE 12(IA)+32=40

UNIT-1: (Entire) Concepts pertaining to ecosystem --- to --- energy flow.

UNIT-2: (Entire) Shelford's Law of tolerance ---- to--- predator –prey relationships.

UNIT-5: IUCN status of species category; important endangered species of NE India. Rhinoceros, Tiger, Golden Langur.

ZooMT-506 PRACTICAL 8(IA)+32=40

1.Find out the abundance and density of insect pests in some essential food commodities.

2. Field study

3. Project work (to be evaluated in semester VI , should be discussed and distributed among the faculty members).

ZooMP-507 ENDOCRINOLOGY 12(IA)+48=60

UNIT-1: Comparative anatomy of Pituitary in Fish, Amphibia, Bird and Mammals.

UNIT-5: (Entire) Neuroendocrine system in insects; role of hormones in growth and development of insects.

ZooMP-508 PRACTICAL 8(IA)+32=40

1. Histological preparation of thyroid gland.
2. Study of permanent slides of endocrine glands.

SEMESTER V GENERAL

ZooGT- 501 GENETICS AND MOLECULAR BIOLOGY 12(IA)+48=60

UNIT-2: (Entire) Concept of gene .....

UNIT-5: Basic steps in gene cloning; cloning vectors.

ZooGP-502 PRACTICAL 8(IA)+32=40

1. Preparation of slides of mitosis and meiosis using suitable material
2. Construction of nucleotides using ball and stick model.

APARAJITA GOGOI, ASSOCIATE PROF. (HOD)

SEMESTER I MAJOR

ZOOMT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION

MARKS : 12IA + 48=60

UNIT -4: MOLLUSCA –Genaral characters and classification upto orders with example; Digestive, respiratory and excretory system of Pila; Shell diversity, torsion and detorsion in Mollusca. ECHINODERMATA - Genaral characters and classification upto orders with example; Water vascular system in starfish, echinoderm larvae.

UNIT-5: Systematics and classification, form and hierarchy of classification; modern species concept.

ZOOMP: 102 MARKS: 8IA + 32 =40

1.Dissection of nervous system of Prawn

2.Identification of Invertebrate specimens

3. Preparation of permanent slides of minimum five suitable invertebrate animals.

SEMESTER I GENERAL

ZOOGT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION

MARKS : 12IA + 48=60

UNIT-4: MOLLUSCA- Torsion and detorsion in gastropoda, economic importance of mollusc; ECHINODERMATA – Feeding and locomotion in starfish.

UNIT-5: Systematics – Definition, classification and its hierarchy; Concept of species and speciation

ZOOGP:102 MARKS: 8IA + 32 =40

1.Dissection of digestive system of cockroach

2. Identification of invertebrate specimens

3. Preparation of permanent slides of suitable invertebrate animals.

SEMESTER III MAJOR

ZooMT – 301: **CHORDATE DIVERSITY AND COMPARATIVE ANATOMY** 12(IA)+48=60

UNIT-3:Distinctive characters and classification of Amphibia upto orders with example; parental care, metamorphosis and neoteny in Amphibia.

UNIT- 4:Mammalia

Unit-5: Comparative account of circulatory system in reptiles, birds and mammals.

ZooMP-302 PRACTICAL 8(IA)+32=40

1. Dissection – 9^{th} and 10^{th} cranial nrves of Scoliodon
2. Identification of vertebrate specimens.
3. Preparation of permanent slides (five minimum slides of vertebrate exoskeleton –scale, feather etc)
4. Study of pectoral and pelvic girdles of bird.

ZooMT – 303 : **BIOINSTRUMENTATION & BIOSTATISTICS** 12(IA)+48=60

UNIT-1:(Entire) Chromatography

UNIT-5: Scope and utility of statistics in Bioscience --- to --- representation of data.

ZooMP – 304 PRACTICAL 8(IA)+32=40

1.Demonstration of instruments prescribed in the syllabus.

SEMESTER III GENERAL

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY 12(IA)+48=60

UNIT-1: Fishes – classification upto orders, respiratory organs and migration.

UNIT-2: Amphibia- classification upto orders, parental care.

UNIT-5: Patterns of cleavage ---- to ---- cell linage.

ZooGP-302 PRACTICAL 8(IA)+32=40

1.Dissection – Afferent branchial system of Scoliodon.

2.Identification as per syllabus. 3. Preparation of permanent slides. 4. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION 12(IA)+48=60

UNIT-1:(Entire)- Mendel's Law of Inheritance.....

UNIT-5: Continental drift --- to --- adaptive radiation

ZooMp-502 PRACTICAL 8(IA)+32=40

1.Simple calculation based on Mendel's mono /dihybrid cross.

ZooMT- 503 ANIMAL PHYSIOLOGY 12(IA)+48=60

UNIT-1: Entire – Muscle and its contraction.....

ZooMP – 504 PRACTICAL 8(IA)+32=40

1.Recording of heart beat of frog by kymograph.

2.Qualitative test of salivary amylase.

ZooMT – 505 ENVIRONMENTAL BIOLOGY AND WILD LIFE 12(IA)+48=60

UNIT-3: Renewable and non-renewable resources ---- to --- sustainable utilization.

UNIT-4: Environmental pollution – (water)—and bioindicators --- to --- ozone layer depletion and its impact.

UNIT- 5: Threats to biodiversity --- to --- ex-situ & in-situ conservation strategies.

ZooMP – 506 PRACTICAL 8(IA)+32=40

4.Find out abundance and densities of terrestrial invertebrates / macrophytes associated fauna by quadrate method.

6. Field study

7. Project work (to be evaluated in VI semester) should be discussed and distributed among the faculty members.

ZooMT – 507 ENDOCRINOLOGY 12(IA)+48=60

UNIT-1: Comparative anatomy of thyroid in fish, amphibian, bird and mammal.

UNIT-4: (Entire) – Roles of hormones in reproductive cycle, pregnancy, parturition and lactation; methods of contraception; amniocentesis and IVF.

ZooMP – 508 PRACTICAL 8(IA)+32=40

1. Histological preparation of gonads.
2. Dissection & display of thyroid gland of fish/ bird.
3. Submission of chart / model of endocrinology.

SEMESTER V GENERAL

ZooGT- 501 GENETICS AND MOLECULAR BIOLOGY 12(IA)+48=60

UNIT -1:Entire - Principles of heredity; Mendel's laws; linkage and crossing over; non-chromosomal inheritance; sex determination in animals.

ZooGP – 502 PRACTICAL 8(IA)+32=40

1.Mendelian problems on monohybrid and dihybrid cross.

COURSE DISTRIBUTION OF SEMESTER II, IV & VI (MAJOR & GENERAL) for the Academic Session 2017-18

MR. SAIBAL DEV, ASSOCIATE PROFESSOR

SEMESTER II MAJOR
PAPER ZooMT - 201 (THEORY) BIOCHEMISTRY - MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: Laws of thermodynamics ------- buffers. (Entire unit)
UNIT 2: Structure and classification of lipids.
PAPER ZooMP – 202 (PRACTICAL) MARKS: 8 (IA) + 32 (END SEM) = 40
4. Estimation of Ascorbic acid in lemon/milk.
5. Separation of amino acids using paper chromatography.

SEMESTER II GENERAL - PAPER-ZooGT-201(THEORY) CELL BIOLOGY AND BIOCHEMISTRY MARKS: 12(IA) + 48(END SEM) = 60
UNIT 3: Cell division (amitosis, mitosis, meiosis).
UNIT 4: Basic principles of biochemistry, acid, base, pH and buffers; types of fats.
UNIT 5: Biological oxidation, glycolysis and Kreb's cycle.
PAPER ZooGP – 202 (PRACTICAL) MARKS: 8 (IA) + 32 (END SEM) = 40
1. Study of mitosis and meiosis with the help of permanent slides.
4. Qualitative test of protein and fat.
5. Qualitative test of salivary amylase.

SEMESTER IV MAJOR
PAPER – ZooMT : 401 (THEORY) CELL BIOLOGY, HISTOLOGY & HISTOCHEMISTRY
MARKS: 12(IA) + 48(END SEM) =60
UNIT 1: Structure and function of lysosome and ribosome.
UNIT 3: (Entire unit) - Cell cycle – molecular events in different phases, regulation of cell cycle normal and malignant cell growth; cell division (mitosis & meiosis); programmed cell death (apoptosis).

UNIT 5: Histological structure of muscles and epithelium.
PAPER – ZooMP : 402 (PRACTICAL) MARKS : 8 (IA) + 32 (END SEM) = 40
1. Study of mitosis in tadpole tail, onion root tip.
3. Histochemical localization of – General lipid by Sudan black B method.
4. Histological Preparation of vertebrate tissue – liver stomach, intestine, kidney, pancreas, testes and ovary and submission of slides.

PAPER – ZooMT : 403 (THEORY) DEVELOPMENTAL BIOLOGY
MARKS : 12(IA) + 48(END SEM) = 60

UNIT 1: (Entire) – Gametogenesis – formation of gametes (spermatogenesis; oogenesis); structure, maturation and growth of sperm and ovum; vitellogenesis.

PAPER – ZooMP : 404 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
1. Study of permanent slides of different embryonic stages of frog/toad.
3. Submossion of permanent stained preparation of at least two stages upto 72 hrs. development stages of chick embryo.

SEMESTER IV GENERAL
PAPER ZooGT – 401 (THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY
MARKS : 12 (IA) + 48(END SEM) = 60
UNIT 1. Balanced diet; digestion and absorption of carbohydrate.
UNIT 2. Composition and constituents of blood groups and Rh factor.
UNIT 4. A brief outline of organisation of endocrine system in mammals; anatomy of thyroid gland.
UNIT 5. Functions of hormones of thyroid gland.

PAPER ZooGP – 402 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
2. Blood group determination.
3. Counting of WBC/RBC (haemocytometer)
5. Study of histological slides of endocrine glands.

SEMESTER VI MAJOR
PAPER ZooMT – 601 (THEORY) PARASITOLOGY AND ETHOLOGY
MARKS:12(IA) + 48(END SEM) = 60
UNIT 1: Life history and mode of infection of and pathogenicity of Leishmania donovani.
UNIT 2: General organization and pathogenicity of bacteria and viruses (Rickettsia, Borrelia, Treponema and Leptospira); life history , parasitic adaptation and pathogenicity of Taenia solium.
UNIT 4: Sense organs and behaviour.

PAPER ZooMP – 602 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40
2. Study of protozoan parasites (permanent slides)
4. Study of habituation in mosquito larvae.

PAPER – ZooMT : 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY
MARKS : 12(IA) + 48(END SEM) = 60
UNIT 2 : Replication and transcription; genetic code; Wobble hypothesis; protein biosynthesis in prokaryotes.
UNIT 5 : Immunoglobulin : Basic structure, classes and functions; clonal selection theory; polyclonal and monoclonal antibodies.

PAPER – ZooMT : 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1: Introduction, history and scope, basic knowledge of genetic engineering, protoplast fusion and somatic hybridization technique; Basic principles of recombinant DNA technology, cutting, joining and visualization of DNA fragments, cloning vectors and gene cloning; application of DNA technology in agriculture and health.

PAPER – ZooMP : 605 (PRACTICAL) MARKS: 13(IA) + 52(END SEM) = 65
Project work = 15 Total =80

1.Determination of blood group and Rh factor.
5. Study of blood cell types in blood smear slides & PROJECT WORK OF VI SEM (M)

PAPER – ZooMT : 606 (THEORY) ECONOMIC ZOOLOGY
MARKS : 12(IA) + 48 (END SEM) = 60

UNIT 3: (Entire) Life history of honey bee (Apis indica); rearing techniques of honey bee; biology and culture of of lac insect.

PAPER – ZooMP : 607 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
7. Apiculture – culture of honeybee and extraction of honey.
8. Analysis of nutrients (carbohydrate, protein and lipid) of honey

SEMESTER VI GENERAL
PAPER – ZooGT : 601 (THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS

UNIT 5: (Entire) Sampling of data; graphic representation of data; histogram, bar diagram and oogive; Mean, maedian and mode; Mean deviation and standard deviation; Significance test(Students' t-test).

PAPER – ZooGP : 602 (PRACTICAL)
4. Simple biostatistical calculation involving mean, mode median and standard deviation.

RAJIB RUDRA TARIANG, ASSISTANT PROFESSOR

SEMESTER II MAJOR PAPER ZooMT: 201(THEORY) BIOCHEMISTRY

MARKS : 12(IA) + 48(END SEM) = 60

UNIT 4: Enzymes – nomenclature, IUB classification, Kinetics and mechanism of action; enzyme inhibition; coenzymes.

UNIT 5: DNA as genetic material, Genetic code, Transcription.

PAPER – ZooMP; 202 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Preparation of normal, molar and buffer solution.
2. Qualitative test for carbohydrates to identify common mono & disaccharides.
3. Essay of enzyme urease/peroxidase by titrimetric method.

SEMESTER II GENERAL

PAPER – ZooGP: 201(THEORY) CELL BIOLOGY AND BIOCHEMISRTY

MARKS:12(IA) + 48(END SEM) = 60

UNIT 1: Structure and function of Golgi bodies, Endoplasmic reticulum

UNIT 4: Nature and function of enzymes, vitamins – their sources and functions.

PAPER – ZooGP : 202 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

2. Preparation of slide for the study of mitosis and meiosis with suitable materials.
4. Qualitative test of carbohydrate.

SEMESTER IV MAJOR

PAPER – ZooMT : 401 (THEORY) CELL BIOLOGY , HISTOLOGY & HISTOCHEMISTRY

MARKS:12(IA) + 48(END SEM) = 60

UNIT 1: Structure and function of ER, Golgi bodies.

UNIT 5: Animal tissues- types and functions; histological structure of lung, liver.

PAPER – ZooMP : 402 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Study of mitosis in tadpole tail, onion root tip.
2. Meiosis in testes of grasshopper or cockroach
4. Histological preparation of liver, stomach, intestine, kidney, pancreas, testes and ovary of vertebrates and submission of slides.

PAPER – ZooMT : 403 (THEORY) DEVELOPMENTAL BIOLOGY

MARKS:12(IA) + 48(END SEM) = 60

UNIT 4: Organogenesis – development of sense organs – ears.

UNIT 5: Extra embryonic membranes in birds and placentation in mammals.

PAPER – ZooMP : 404 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Study of permanent slides of different embryonic stages of toad/frog.
3. Submission of permanent stained preparation of at least two stages upto 72 hrs. development stages of chick embryo.

SEMESTER IV GENERAL – PAPER : ZooGT : 401(THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY MARKS:12(IA) + 48(END SEM) = 60

UNIT 2: Physiology of respiration in mammals

UNIT 3: Drug addiction and its impact on society.

UNIT 4: Anatomy of pituitary and pancreas; neuroendocrine system in insects.

UNIT 5: Functions of hormones of pituitary and pancreas.

PAPER – ZooGP; 402(PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Preparation of haemin crystals

2. Blood group determination

5. Study of histological slides of endocrine glands.

SEMESTER VI

PAPER – ZooMT: 601(THEORY) PARASITOLOGY AND ETHOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: Life history, mode of infection and pathogenicity of Giardia intestinalis.

UNIT 2: Life history, parasitic adaptation and pathogenicity of Wuchereria bancrofti.

UNIT 3:(Entire) Vectors of human diseases- Malaria, Yellow fever, Dengue, haemorrhagic fever, filariasis, Japanese B-encephalitis and dengue; measures of control of the vectors.

UNIT 5: Social behaviour in insects.

PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

3. Study of geotactic, phototactic, chemotactic and sociotactic behaviour of earthworm, cockroach, Paramecium and fish.

4. Study of habituation in mosquito larvae.

PAPER ZooMT; 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: (Entire) Genome organization in prokaryotes and eukaryotes, DNA as genetic material, structure and functions of DNA & RNA; Watson & Crick Model of DNA; Other forms of DNA.

UNIT 5: AIDS

PAPER – ZooMT: 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: Industrial biotechnology with special reference to production of alcohol and antibiotics.

UNIT 3: (Entire) Regulation of biotechnology: production and application of transgenic animals and plants. Genetically modified organism, their benefits and risk assessment; IPR, patents and ethical issues related to biotechnology .

PAPER – ZooMP : 605 (PRACTICAL) MARKS : 13(IA) + 52(END SEM) = 65

3. Detection / estimation of RNA PROJECT WORK = 15

5. Study of blood cell types in blood smear. TOTAL=80

PROJECT WORK – VI SEM Major students.

PAPER- ZooMT : 606 (THEORY) ECONOMIC ZOOLOGY

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: (Entire) Major insect pests of paddy, tea and stored grains and their biology; Pest management – chemical and biological; integrated pest management.

UNIT 5: Piggery management and practices of pig rearing.

PAPER – ZooMP: 607(PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1. Identification of silkworms (eri, muga & mulberry), immature and adult stages.
3. Study of important pests of paddy, tea plants and stored grains and their submission.
6. Demonstration of induced breeding in fish.

SEMESTER VI GENERAL

PAPER – ZooGT : 601 (THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 2: (Entire) Food chain and energy flow, food web.

UNIT 4: (Entire) Basic concept of wildlife and Protected Areas of Assam, endangered fauna of NE India and their conservation.

PAPER – ZooGP: 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1. To find out the abundance and density of soil fauna by quadrate method.
2. To find out the biotic components of a grassland/pond ecosystem and make probable food chain and food web.

KISHOR HALOI, ASSISTANT PROFESSOR

SEMESTER II MAJOR MARKS: 12(IA) + 48 (END SEM) = 60

PAPER – ZooMT: 201 (THEORY) BIOCHEMISTRY MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 2. Structure and function of carbohydrates, proteins, amino acids; levels of organizations of proteins.

UNIT 5. Structure and functions of DNA and RNA; DNA replication.

PAPER – ZooMP: 202 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) = 40

1. Preparation of normal, molar and buffer solution.
2. Qualitative test for carbohydrates to identify common mono & disaccharides.
3. Essay of enzyme urease/peroxidase by titrimetric method.

SEMESTER II GENERAL

PAPER- ZooGT: 201(THEORY) CELL BIOLOGY AND BIOCHEMISTRY
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: Structure and function of plasma membrane, membrane transport- osmosis, diffusion and active transport.

UNIT 3: Cell cycle; basic concept of cancer.

UNIT 4: Types of carbohydrates, proteins.

PAPER – ZooGP: 202 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) = 40

1. Study of mitosis and meiosis with the help of permanent slides.
3. Preparation of normal and molar solution.
4. Qualitative test of carbohydrate.
5. Qualitative test of salivary amylase.

SEMESTER IV MAJOR

PAPER – ZooMT : 401 (THEORY) CELL BIOLOGY, HISTOLOGY AND HISTOCHEMISTRY
MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1. Overview of prokaryotic and eukaryotic cells; structure and function of plasma membrane (lipid bilayer model); extra cellular matrix; receptor mediated endocytosis.

UNIT 2. DNA packaging in prokaryotes and eukaryotes, models of chromosomal movements.

UNIT 5. Types of staining; vital staining, classification and properties of dyes; metachromatic dyes and staining; animal tissues – histological structure of stomach and intestine.

PAPER- ZooMP:402 (PRACTICAL) MARKS: 8(IA) + 32(END SEM)= 40

1. Study of mitosis in tadpole tail.
2. Meiosis in testes of grasshopper or cockroach.

4. Histological preparation of liver, stomach, intestine, kidney, pancreas, testes and ovary of vertebrates and submission of slides.

PAPER-ZooMT: 403 (THEORY) DEVELOPMENTAL BIOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 3: (Entire) Cleavage and gastrulation – cleavage pattern ---- to--- inductive substances.

UNIT 5: Organogenesis – development of eyes.

PAPER- ZooMP: 404 (PRACTICAL) MARKS: 8(IA) + 32(END SEM)= 40

2.Study of permanent slides of developmental stages in chick embryo.

SEMESTER IV GENERAL

PAPER- ZooGT: 401 (THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: Physiology of excretion in mammals.

UNIT 3: Neurons and conduction of nerve impulse.

UNIT 5: General characters of hormones, feedback mechanism

PAPER-ZooGP: 402 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) =40

1. Preparation of haemin crystal.
1. Counting of WBC/RBC (haemocytometer)
5. Study of histological slides of endocrine glands.

SEMESTER VI

PAPER – ZooMT: 601 (THEORY) PARASITOLOGY AND ETHOLOGY

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: Life history, mode of infection and pathogenicity of Trichomonas vaginalis & Plasmodium spp.

UNIT 2: Life history, parasitic adaptation and pathogenicity of Ancylostoma duodenale.

UNIT 4: Introduction to animal behaviour; brief history of ethology; patterns of behaviour; genetical and ecological aspect of behaviour.

PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1. Identification of mosquito species causing malaria, encephalitis, and dengue fever.

3. Study of geotactic, phototactic, chemotactic and sociotactic behaviour of earthworm, cockroach, Paramecium and fish.

PAPER ZooMT; 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 3: (Entire) Recombination in prokaryotes; transformation, conjugation and transduction;concept of transposons and plasmids; regulation of gene expression in prokaryotes, operon concept(Lac operon).

UNIT 5: Major histocompatibility complex- structure and function; immune system in health and disease.

PAPER- ZooMT: 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 2: DNA sequencing, human genome project.
UNIT 4: Nucleic acid and protein sequence database (NCBI, gene bank and SWISS-PROT) Data mining and data mining tools.
PAPER-ZooMP:605 (PRACTICAL) MARKS: 13(IA) + 52(END SEM) = 65
3.Detection/ estimation of RNA PROJECT WORK =15 TOTAL=80
7.Different e-resources and database search
8.Similarity search in sequence such as BLAST / FASTA

PAPER- ZooMT: 606 (THEORY) ECONOMIC ZOOLOGY
MARKS: 12(IA) + 48(END SEM) = 60
UNIT 2: (Entire) Life histories of silk worm (eri, muga and mulberry); culture technique of silk worms; diseases of silk worms and its prevention.
UNIT 5: Poultry: selection of breed (chicken and duck) and their scientific rearing methods; poultry diseases and its prevention/control.

PAPER- ZooMP: 607 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) = 40
1. Identification of silkworms (eri, muga and mulberry)
2. Submission of life cycles of eri/muga/mulberry silkworms.
7. Apiculture- culture of honey bee and extraction of honey.
8. Analysis of nutrients (carbohydrate, protein and lipid) of honey.

SEMESTER VI GENERAL
PAPER-ZooGT: 601(THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS
MARKS:12(IA) + 48(END SEM) = 60
UNIT 3: (Entire) Environmental pollution and types, sources, cause, control and prevention of air and water pollution; biogeochemical cycles (carbon & nitrogen), green house effect, ozone depletion and its impact.

PAPER-ZooGP: 602 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) =40
1. To find out the abundance and density of soil fauna by quadrate method.
2. To find out the biotic components of a grassland /pond ecosystem and make probable food chain and food web.

APARAJITA GOGOI, ASSOCIATE PROFESSOR

SEMESTER II MAJOR (THEORY)

PAPER- ZooMT : 201 (THEORY) BIOCHEMISTRY MARKS: 12(IA) + 48 (END SEM) =60

UNIT 3: General concept of metabolism – Glycolysis, Kreb's cycle, Electron transport system, and ATP synthesis; Beta oxidation of fatty acids.

UNIT 4: Vitamins (sources and functions)

PAPER- ZooMP :202 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1.Preparation of molar, normal and buffer solution

2. Essay of enzyme urease/ peroxidise by titrimetric method.

4. Estimation of ascorbic acid in lemon / milk.

SEMESTER II GENERAL (THEORY)

PAPER- ZooGT: 201 (THEORY) CELL BIOLOGY AND BIOCHEMISTRY

MARKS: 12(IA) + 48(END SEM)= 60

UNIT 1: General structure and function of prokaryotic and eukaryotic cells;

UNIT 2: Structure and function of mitochondria, nucleus and chromosome.

UNIt 5: Electron transport system , synthesis of ATP.

PAPER-ZooGP: 202 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

3.Preparation of normal and molar solution.

4. Qualitative tests of proteins and fats.

SEMESTER IV MAJOR

PAPER- ZooMT (THEORY) 401: CELL BIOLOGY, HISTOLOGY & HISTOCHEMISTRY

MARKS: 12(IA) + 48(END SEM)= 60

UNIT 1: Structure and function of mitochondria, nucleus

UNIT 4: Basic concept of cell signalling (endocrine, paracrine and autocrine signalling);

Second messengers; function of cell surface receptors- G protein coupled receptors and G-proteins.

UNIT 5: Histological methods- basic principles of fixation, dehydration, embedding, sectioning and spreading; histological structure of bone. kidney.

PAPER- ZooMP: 402 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1.Study of mitosis in onion root tip.

3. Histochemical localization of - a) general lipid by Sudan black B method b)metachromatic substances by Toluidene blue method.

4. Histological preparation of liver, stomach, intestine, kidney, pancreas testes and ovary of vertebrates and submission of slides.

PAPER –ZooMT : 403 (THEORY) - DEVELOPMENTAL BIOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: Fertilization- types and mechanism of fertilization; mono and polyspermy; parthenogenesis.

UNIT 3: Fate maps, fate of germ layers.

PAPER- ZooMP: 404 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

2.Study of permanent slides of developmental stages in chick embryo.

3.Submission of permanent stained preparation of at least two stages up to 72 hrs. developmental stages.

SEMESTER IV GENERAL

PAPER- ZooGT : 401 (THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1: Digestion and absorption of proteins and fats.

UNIT 2: Blood coagulation

UNIT 4: Anatomy of adrenal gland of mammals

UNIT 5: Functions of adrenal gland.

PAPER- ZooGP : 402(PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

2. Blood group determination

4. Display of pituitary and gonads of fishes.

5. Study of histological slides of endocrine glands.

SEMESTER VI MAJOR

PAPER – ZooMT : 601 (THEORY) PARASITOLOGY AND ETHOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1: Parasitism; types of parasites, hosts and vectors; parasitic adaptations and effects on hosts; life history and mode of infection and pathogenicity of E.histolytica, Trypanosoma spp.

UNIT 2: Life history and parasitic adaptation and pathogenicity of Fasciola hepatica.

UNIT 5: Different types of orientation and communication in animals, comparative aspect of learning, offensive and defensive behaviour.

PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1.Identification of mosquito species causing malaria, encephalitis and dengue fever.

2. Study of protozoan parasites (permanent slides).

PAPER – ZooMT: 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 4: (Entire) Types of immunity; cells and organs involved in immunity; lymphoid organs; antigens, properties of antigens, adjuvants and haptens; antigen- antibody reaction; vaccines and vaccinations.

UNIT 5: Basic concept of immunodiagnostic techniques (immuno-diffusion, RIA and ELISA).

PAPER- ZooMT : 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: Introduction to Omics; basic concept of structural and functional genomics, introduction to proteomics and transcriptomics.

UNIT 4: Fundamentals of bioinformatics: introduction history and scope of bioinformatics; sources of information, internet – world wide web and web browsers; Biological database: introduction, basic concepts of primary and secondary databases.

PAPER- ZooMP: 605 (PRACTICAL) MARKS: 13(IA) + 52 (END SEM)=65 + Project work= 15 Total = 80

2. Preparation and demonstration of ball and stick model of nucleotides.

6. Study of blood cell types in blood smear slides.

8. Similarity search in sequence such as BLAST / FASTA

Project work of VI Sem (M) students.

PAPER- ZooMT: 606 (THEORY) ECONOMIC ZOOLOGY; MARKS: 12(IA) + 48(END SEM)=60

UNIT 4: (Entire)Principles and practices of aquaculture; fish and prawn culture; preparation and management of different types of ponds for fish culture; induced breeding and hybridization technique in fishes; fish preservation methods; fish by-products.

PAPER- ZooMP: 607(PRACTICAL) MARKS: 8(IA) + 32(END SEM)=40

4. Identification of fish and prawn available locally.

5. Identification of common aquatic weeds, plankton and insects.

6. Demonstration of induced breeding in fish.

SEMESTER VI GENERAL

PAPER- ZooGT: 601 (THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS

MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1:(Entire) Basic concept of ecosystem; brief account of abiotic and biotic factors in grassland and aquatic ecosystem; population structure.

PAPER-ZooGP: 602 (PRACTICAL) MARKS:8(IA) + 32(END SEM) =40

3.Study of man-made ecosystems (biotic and abiotic components)

4. Simple biostatistical calculations involving mean, median, mode and standard deviation

SEMESTER VI

PAPER – ZooMT: 601(THEORY) PARASITOLOGY AND ETHOLOGY

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: Life history, mode of infection and pathogenicity of Trichomonas vaginalis & Plasmodium spp.

UNIT 2: Life history, parasitic adaptation and pathogenicity of Ancylostoma duodenale.

UNIT 4: Introduction to animal behaviour; brief history of ethology; patterns of behaviour; genetical and ecological aspect o behaviour.

PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1. Identification of mosquito species causing malaria, encephalitis, and dengue fever.

3. Study of geotactic, phototactic, chemotactic and sociotactic behaviour of earthworm, cockroach, Paramecium and fish.

PAPER ZooMT; 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY

MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 3: (Entire) Recombination in prokaryotes; transformation, conjugation and transduction;concept of transposons and plasmids; regulation of gene expression in prokaryotes, operon concept(Lac operon).

COURSE DISTRIBUTION

for the

ACADEMIC SESSION: 2018-19

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DIGBOI COLLEGE

DEPARTMENT OF ASSAMESE

SYLLAUS DISTREBUTION, 2018-2019(ODD SEMESTER)

1st ,3rd and 5th semester(from July,2018 to Dec,2018)

1st semester

Paper code	Course title	unit	Name of the Teacher
Major I ASMM 101	History of Assamese Literature (From the Begening to Post Sankardeva Period)	01	Simanta Bordoloi
		02	Deepa Sarma Borthakur
		03	Purnananda Saikia
		04	Achyut Saikia
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
MIL I ASM 101	History of Assamese Literatur and Study of Assamese Culture	01	Simanta Bordoloi
		02	Achyut Saikia
		03	Achyut Saikia
		04	Dr. Mrinal kr. Gogoi
		05	Purnananda Saikia
		06	Deepa Sarma Borthakur

3rd semester

Paper code	Course title	unit	Name of the Teacher
Major III ASMM 301	Introduction to Linguistics	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Deepa Sarma Borthakur

Paper code	Course title	unit	Name of the Teacher
Major IV ASMM 302	Selection from Assamese Poetry	01	Achyut Saikia
		02	Achyut Saikia
		03	Purnananda Saikia
		04	Purnananda Saikia
		05	Purnananda Saikia

Paper code	Course title	unit	Name of the Teacher
MIL I COMMERCE ASMC	Modern Indian Language(Assamese	01	Purnananda Saikia
		02	Deepa Sarma Borthakur & Simanta Bordoloi

301		03	Achyut Saikia
		04	Dr. Mrinal kr. Gogoi & Simanta Bordoloi

5th Semester.

Paper code	Course title	unit	Name of the Teacher
Major VII ASMM 501	Literary Theory and Creticism	01	Dr. Mrinal kr. Gogoi
		02	Dr. Mrinal kr. Gogoi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
Major VIII ASMM 502	Assamese Drama	01	Simanta Bordoloi
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Deepa Sarma Borthakur
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
Major IX ASMM 503	Cultural Studies	01	Purnananda Saikia
		02	Purnananda Saikia
		03	Purnananda Saikia
		04	Purnananda Saikia
		05	Purnananda Saikia

Paper code	Course title	unit	Name of the Teacher
Major X ASMM 504	Comparative Indian Literature	01	Achyut Saikia
		02	Achyut Saikia
		03	Achyut Saikia
		04	Achyut Saikia
		05	Achyut Saikia

DEPARTMENT OF ASSAMESE

SYLLAUS DISTREBUTION,2018-2019(Even SEMESTER)

2nd ,4th and 6th semester(from Jan,2019to June,2019)

2nd semester

Paper code	Course title	unit	Name of the Teacher
Major II ASMM 201	History of Assamese Literature (From the Arunodoi to Post war Period)	01	Achyut Saikia
		02	Simanta Bordoloi
		03	Purnananda Saikia
		04	Deepa Sarma Borthakur
		05	Dr. Mrinal Kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
MIL II ASM 201	Practices of Assamese Language	01	Dr. Mrinal kr. Gogoi & Achyut Saikia
		02	Achyut Saikia
		03	Purnananda Saikia
		04	Dr. Mrinal kr. Gogoi
		05	Deepa Sarma Borthakur & Simanta Bordoloi

4th semester

Paper code	Course title	unit	Name of the Teacher
Major V ASMM 401	Assamese Prose Literature	01	Achyut Saikia
		02	Purnananda Saikia
		03	Simanta Bordoloi
		04	Simanta Bordoloi
		05	Achyut Saikia

Paper code	Course title	unit	Name of the Teacher
Major VI ASMM 402	Language and Script of Assam	01	Deepa Sarma Borthakur
		02	Dr. Mrinal kr. Gogoi
		03	Deepa Sarma Borthakur
		04	Deepa Sarma Borthakur
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
MIL III NON MAJOR ASM 401	Selection from Assamese Literature	01	Purnananda Saikia
		02	Deepa Sarma Borthakur
		03	Simanta Bordoloi
		04	Achyut Saikia
		05	Dr. Mrinal kr. Gogoi

6th semester

Paper code	Course title	unit	Name of the Teacher
Major XI ASMM 601	Various aspects of Studying Language and Literature	01	Purnananda Saikia
		02	Simanta Bordoloi
		03	Simanta Bordoloi
		04	Purnananda Saikia
		05	Achyut Saikia

Paper code Major XII ASMM 602	Course title	unit	Name of the Teacher
	Indo Aryan Languages and Assamese Language	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Simanta Bordoloi
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
Major XIII ASMM 603	Linguistic Study of Assamese Language	01	Dr. Mrinal kr. Gogoi
		02	Dr. Mrinal kr. Gogoi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
Major XIV ASMM 604	Introduction to World Literature	01	Achyut Saikia
		02	Purnananda Saikia
		03	Achyut Saikia
		04	Achyut Saikia
		05	Purnananda Saikia & Achyut Saikia

DEPARTMENT OF BENGALI

Course Distribution
Digboi College, Digboi.
Session: 2018-2019

Faculty Name	semester	Paper to Teach
	1st SEM	UNIT- 1&3
	2nd SEM	UNIT-2&4
	3rd SEM	UNIT-1,3&5
Dipesh Mandal	4th SEM	UNIT- 1&3
	1ST SEM	UNIT- 2&4
	2nd SEM	UNIT- 1&3
Dr. Kanai Das	3rd SEM	UNIT- 2&4
	4th SEM	UNIT- 2&4

(Dipesh Mandal)

Signature of HoD

Department of Bengali.

DEPARTMENT OF CHEMISTRY

Session: June 2018-Dec 2018

Semester I (Non CBCS)	Semester III (Non CBCS)	Semester V (Non CBCS)
Paper MM-101-Physical+Inorganic+Organic	**Paper MM-301 (Inorganic Chemistry)**	**Paper MM-501 (Physical Chemistry)**
Section I- Physical Chemistry	Unit 1: NH	Unit I: NJK
	Unit 2: NH	Unit II: NJK
Unit I: NJK	Unit 3: NH	Unit III: NJK
Unit II: JD		Unit IV: JD
Unit III: JD		Unit V: JD
Section II-Inorganic Chemistry	**Paper MM-303 (Organic Chemistry)**	**Paper MM-503 (Inorganic Chemistry)**
Unit I: NH	Unit I:BS	Unit I: NH
Unit II: NH	Unit II:BS	Unit II: NH
	Unit III:BS	Unit III: NH
Section III-Organic Chemistry	Unit IV:BS	Unit IV: NH
	Unit V: BS	
Unit I: BS		
Unit II: BS		**Paper MM-505 (Organic Chemistry)**
Paper NM-101 **Inorganic + Physical+ Organic**	**Paper: NM-301 (Organic Chemistry)**	Unit I: BS
		Unit II: BS
Section I-Inorganic Chemistry		Unit III: BS
	Unit I: BS	Unit IV: BS
Unit I: NH	Unit II: BS	Unit V: BS
Unit II: NH	Unit III: NJK	
	Unit IV: NJK	**Paper MM-507(Symmetry and Quantum**
Section II- Physical Chemistry	Unit V: BS	**Chemistry)**
Unit III: NJK		Unit I: NH
Unit IV: JD		Unit II: JD
Unit V: JD		Unit III: JD
Section III- Organic Chemistry		**Paper: NM 501**
		(Inorganic Chemistry +
Unit VI: BS		**Physical Chemistry**
Unit VII: BS		Unit I: NH
Unit VIII: BS		Unit II: NH
		Unit III: NH
		Second half
		Unit I: JD
		Unit II: JD
		Unit III: JD
		Unit IV: NJK
		Unit IV: NJK
		Unit VI: NJK

JD: Mrs Jonali Dutta, NH: Mrs. Neelakshi Hazarika, NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia,

DEPARTMENT OF CHEMISTRY

Course distribution

Session: Jan 2019-May 2019

Semester II (Non CBCS)	Semester IV (Non CBCS)	Semester VI (Non CBCS)
MM-201 Physical+Inorganic+Organic	**Paper MM-401 (Physical Chemistry)**	**Paper MM-601 (Physical Chemistry)**
Section I- Physical Chemistry	Unit 1: JD	Unit I: JD
	Unit 2: NJK	Unit II: JD
Unit I: NJK	Unit 3: JD+NJK	Unit III: NJK
Unit II: JD		Unit IV: NJK
		Unit V: JD
Section II-Inorganic Chemistry		
	Paper MM-403 (Organic Chemistry)	**Paper MM-603 (Inorganic Chemistry)**
Unit I: NH		
Unit II: NH	Unit I: BS	Unit I: NH
	Unit II: BS	Unit II: NH
Section III-Organic Chemistry	Unit III: BS	Unit III: NH
	Unit IV: BS	Unit IV: NH
Unit I: BS	Unit V: BS	
Unit II: BS		**Paper MM-605 (Organic Chemistry)**
Unit II: BS		
		Unit I: BS
NM-201 Inorganic Chemistry	**Paper NM-405 (Physical Chemistry)**	Unit II:BS
		Unit III:BS
Unit I: NH	Unit I: NJK	Unit IV:BS
Unit II: NH	Unit II: JD	Unit V:BS
Unit III: NH	Unit III: NJK	Unit VI:BS
Unit IV: NH	Unit IV: JD	
		Paper MM-607(Molecular Spectroscopy)
		Unit I: NH +JD
		Unit II: NH
		Unit III: NH +JD
		Unit IV: JD
		Unit IV: NH
		Paper NM-601 (Organic Chemistry)
		Unit I: BS
		Unit II: BS
		Unit III:BS
		Unit IV: BS
		Unit V: NJK
		Unit VI: BS

JD: Mrs Jonali Dutta, NH: Mrs. Neelakshi Hazarika, NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia,

DEPARTMENT OF COMMERCE

Subject-wise Syllabus Distribution for the Academic session June-Dec 2018

Stream/ Subjects / Name Of The Faculty	SUBJECTS																Remarks
	HS 1ST YEAR		HS 2ND YEAR		B.COM 1 SEM		B.COM 3RD SEM					B.COM 5TH SEM					
	ACCY	BST	ACCY	BST	FA	BL	ITLP	MPA	HRM	BSTAT	ECOM	MA	ENTREP	DTAX	SM	RM	
PRADIP CH. DAS	IV,V,VII,VIII		I,V,VI		IV		Unit-I,II,V							Unit-I,II,III,IV			
CHENI CHANDRA BORUAH		III, VI, VII,		Unit I, II, III, IX, X, XI		Unit IV, V		Unit I, V	Unit II, IV, V						Unit I, II	Unit I, II, III, IV	
BHABABHUTI S BARUAH		VIII,XI, XII				I,III		III, IV			II(half), I V				III, IV		
SAMPREETI BORUAH	VI,IX,X		B/Unit-I,II,III,IV		Unit-I, III		Unit-III,IV			Unit-II, IV		Unit-I,II,III	Unit-III,IV				
RAMJANUL HAQUE	Unit-I,II,III		A/Unit-II,III,IV, V		Unit-II, V					Unit-I, V	Unit-II (half), III, V	Unit-IV	Unit-I,II				
DEBORSHEE GOGOI		Unit I,II, IV,V, IX, X		Unit IV, V, VI, VII, VIII, XII		Unit I,I		Unit II,	Unit I, III	Unit-VI, III	Unit I,				,		

DEPARTMENT OF COMMERCE

Subject-wise Syllabus Distribution for the Academic session Jan-May 2019

Stream/ Subjects / Name Of The Faculty	SUBJECTS																		
	HS 1ST YEAR		HS 2ND YEAR		B.COM 2nd SEM		B.COM 4th SEM					B.COM 6th SEM							
	ACCY	BST	ACCY	BST	CA	CL	CA	AUD	SMKT	SAPM	CB	FSA	DT-II	RM	AM	SBM	IM	BAPP
PRADIP CH. DAS	Unit-IV,V,VII, VIII		A/B/Unit-I,V,VI		Unit-IV		Unit-I,II,V			Unit-V		Unit-III		Unit-I,II,III,IV				
CHENI CHANDRA BORUAH		Unit III, VI, VII,		Unit I, II, III, IX, X, XI		Unit IV, V		Unit I, V	Unit II, IV, V		Unit II, IV, V					Unit I, II	I,II	I
BHABABHUTI S BARUAH		VIII, XI, XII		VIII, XII												III		II
SAMPREETI BORUAH	Unit-VI,IX,X		B/Unit-I,II,III,IV		Unit-I, III		Unit-III,IV			Unit-II, IV		Unit-I,II	Unit-III,IV					
RAMJANUL HAQUE	Unit-I,II,III		A/Unit-II,III,IV, V		Unit-II, V					Unit-I, III		Unit-IV	Unit-I,II					
D GOGOI		Unit I,II, IV,V, IX, X		Unit IV, V, VI, VII,		Unit I,II,III		Unit II, III, IV	Unit I, III		Unit I, III				I, II, III, IV	IV	III, IV	III, IV

DEPARTMENT OF EDUCATION

COURSE DISTRIBUTION for -2018-19

Course –major
Class/Semester-V
Name of the paper- 501,502,503
(EDUCATION IN POST INDEPENDENT INDIA, EDUCATIONAL TECHNOLOGY, CHILD PSYCHOLOGY)
Marks Assigned- 80

Units Assigned	**Name of the Teacher**	Remarks
EDUCATION IN POST INDEPENDENT INDIA -ALL	**POBAN GOGOI**	
EDUCATIONAL TECHNOLOGY –ALL UNIT	**PRADIP DUTTA**	
CHILD PSYCHOLOGY –ALL UNIT	**SNEHA GOGOI**	

Course –major
Class/Semester-V
Name of the paper-**TECHNIQUES AND METHODOLOGY OF TEACHING 504**
Marks Assigned-50

Units Assigned	**Name of the Teacher**	Remarks
II	**POBAN GOGOI**	
I	**PRADIP DUTTA**	
III	**SNEHA GOGOI**	

Class/Semester-V
Name of the paper; PRACTICE TEACHING
Marks Assigned- 50

Units Assigned	**Name of the Teacher**	Remarks
MICRO LESSON PLAN	**POBAN GOGOI**	
MACRO LESSON PLAN	**PRADIP DUTTA**	
MICRO LESSON PLAN	**SNEHA GOGOI**	

Course –Honors'
Class/Semester-vi -601
Name of the paper- laboratory practical
Marks Assigned- 50

Units Assigned	**Name of the Teacher**	Remarks
I, II	**POBAN GOGOI**	
II	**PRADIP DUTTA**	
II	**SNEHA GOGOI**	

Class/Semester-VI -602
Name of the paper –**Field report**
Marks Assigned-50

Units Assigned	**Name of the Teacher**	Remarks
SUPERVISOR (NO OF STUDENTS-06)	**POBAN GOGOI**	
SUPERVISOR (NO OF STUDENTS-05)	**PRADIP DUTTA**	
SUPERVISOR (NO OF STUDENTS-07)	**SNEHA GOGOI**	

Class/Semester V I
Units Assigned- –**All**
Marks Assigned-80

NAME OF THE PAPER	**Name of the Teacher**	Remarks
EDUCATIONAL MANAGEMENT	**POBAN GOGOI**	
EDUCATION IN A WORLD PERSPECTIVE	**PRADIP DUTTA**	
EMERGING TRENDS IN INDIAN EDUCATION	**SNEHA GOGOI**	

DEPARTMENT OF ELECTRONICS
DIGBOI COLLEGE
Digboi - 786171
Tinsukia (Assam), India
e-mail- electronics.digboicollege@gmail.com
website:
www.digboicollege.edu.in

Ref:

Course Distribution
Session: Odd Semester 2018-19

Faculty Name	Semester	Paper to Teach
Dr. Jayanta Handique	1st	101M (All Unit) , 101G (unit- 2, 6)
	3rd	301G (Unit- 1,4)
	5th	501M (All Unit), 501G (Unit-4), RMEG501(Unit-1, 2, 4)
Mr. Satish Gupta	1st	101G(Unit-3,5)
	3rd	302M (Unit- All), 301G (Unit- 5, 6)
	5th	503M(Unit- All), 501G (Unit-3, 5), RMEG501(Unit-3,5)
Mr. Pradeep K. Khound	1st	101G (unit- 1,4)
	3rd	301M (Unit- All), 301G (Unit- 2, 3)
	5th	502M(Unit- All), 501G (Unit-1, 2)

Course Distribution
Session: Even Semester 2018-19

Faculty Name	Semester	Paper to Teach
Dr. Jayanta Handique	2nd	201G (unit- 2)
	4th	401M (Unit- All), 401G (Unit-3)
	6th	603M (All Unit), 601G (Unit-1,2), RMEG601(Unit-3, 4)
Mr. Satish Gupta	2nd	201G(Unit-4)
	4th	402M (Unit- All), 401G (Unit- 4, 6)
	6th	602M(Unit- All), 601G (Unit-3, 4), RMEG601(Unit-1,2)
Mr. Pradeep K. Khound	2nd	201M (Unit- All), 201G (Unit-1,3)
	4th	401G (Unit- 1, 2, 5)
	6th	601M(Unit- All)

DIGBOI COLLEGE: DEPT. OF ENGLISH
Distribution of Syllabus (June-Dec, 2018)

H.S. 1st year: General English

Unit	Arts	Science	Commerce
Unit I: Comprehension-20	GB	SD	SD
Unit II: Writing Skills-20	BRP	PB	PB
Unit III: Grammar-10	BRP	PB	PB
Unit IV: Portrait of a lady-5	CC	JD	JD
Landscape of the soul-5	CC	JD	JD
The Ailing Planet-5	CC	JD	JD
My Impressions of Assam-5	GB	SD	SD
A Photograph-2.5	CC	JD	JD
The Voice of the Rain-2.5	CC	JD	JD
Childhood-2.5	CC	JD	JD
Father to Son-2.5	GB	SD	SD
Ranga's Marriage-5	GB	SD	SD
Albert Einstein at School-5	BRP	PB	PB
Unit V: Listening and speaking-10	All teachers		

H.S. 1st year: Alt. English

Unit	Teacher
Unit I: Prose	
The Suitor and Papa	**SD**
The Rule of the Road	**SD**
The Many and The None	**GB**
Box and Cox	**GB**
Unit II: Poetry	
The Daffodils	**SD**
When Autumn Come	**SD**
The Listeners	**GB**
Once upon a time	**GB**
Unit III: Grammar (article, tense using conditionals, identifying nouns &adjectives, pairs of words)	**GB**
Unit II: Composition (on prose passage and poem)	**SD**

21.6.2018

Semester I: General English

Unit		Arts Gr-A	Arts Gr-B	Science
Unit I:	Comprehension- Precis	BRP	GB	GB
Unit II:	Letter	CC	JD	CC
Unit III:	Note Making, Memo, short notes	BRP	GB	GB
Unit IV:	Paragraph writing Report writing	PB	PB	PB
Unit V:	Transcoding	CC	JD	CC

Semester I: Business Communication

Unit		Teacher
Unit I:	Introducing Business Communication	GB
Unit II:	Corporate Communication	JD
Unit III:	Practice in Business Communication	SD
Unit IV:	Business Letters and Memo Formats	JD

Semester I (Arts): Alt. English

Unit	Topic	Teacher
Unit I:	Shakespeare: Sonnet 30	BRP
	Milton: On his Blindness	BRP
	Wordsworth: the Solitary Reaper	BRP
Unit II:	Hopkins: Pied Beauty	PB
	Yeats: Easter 1916	SD
	Ted Hughes: Hawk Roosting	SD
Unit III:	Whitman: Song of Myself	CC
	Pound: The River Merchant's Wife: A letter	PB
	L.Hughes: Necessity, I too sing America	CC
Unit IV:	Ramanujan: Breaded Fish	PB
	Kamala Das: An Introduction	PB
	Vikram Seth: Frogs and Nightingales	PB

Semester I: English Major

Unit	Topic	Teacher
Unit I:	The Anglo-Saxon Period	JD
Unit II:	The Age of Chaucer	BRP
Unit III:	The Renaissance	CC
Unit IV:	The Puritan Legacy and the Commonwealth	SD
Unit V:	The Restoration	GB

21.6.18

Jan-Dec, 2018

BA 3rd Semester: General English

Unit	Topic	Teacher
Unit I:	Wordsworth: We are Seven R. Frost: Mending Wall T.S.Eliot: To the Indians.... N.Ezekiel: A Very Indian poem in Indian English	SD
Unit II:	L. Hughes: Ballad of the Landlord S. Heaney: The Wife's Tale Grace Nichols: Wherever I Hang D, Walcot: Koeining of the River	PB
Unit III:	A. Chekhov: A Marriage Proposal	BRP

BA 3rd Semester: CMSK

Unit	Topic	Teacher
Unit I:	Essay Writing	CC
Unit II:	Conversational English	JD
Unit III:	Common Mistakes in English	JD
Unit IV:	Grammar in Communication	CC

B.Com 3rd Semester: Alt. English::

Unit	Topic	Teacher
Unit I:	Letter, Essay	GB
Unit II:	Report-, Transcoding-; Memo-	PB
Unit III:	Aurobindo: -The importance of Original ~~Insturanec~~ Thinking Krishnamurty; Function of education- Satyajit Ray-Film Making-	BRP BRP GB
Unit IV:	Coetzee-Playground- Naipaul-Beginning- Amitav Ghosh-: Books	BRP BRP PB

21.6.18

Jun - Dec, 2018

Major: 301:
Unit I: Language-SD;
Unit II: Critical Terms-PB
Unit III: Classical Mythology-BRP

Major: 302:
Unit I: Shakespeare, Donne, Herbert-CC
Unit II: Paradise Lost-GB
Unit III: Wordsworth, Keats-BRP
Unit IV: Browning, Arnold-JD
Unit V: Yeats, Eliot-PB

Major 501:
Unit I: Background of Drama-BRP/SD/CC
Unit II: King Lear-BRP
Unit III: Pygmalion-CC
Unit IV: Waiting for Godot-SD

Major 502:
Unit I: Poetics-GB
Unit II: Sublime-PB
Unit III: Apology for Poetry-SD
Unit IV: Preface to Shakespeare-BRP

Major 503:
Unit I: Machiavelli-GB
Unit II: Locke-GB
Unit III: Rousseau-PB
Unit IV: Marx-JD

Major 504:
Unit I: History of Indian English writing-PB/JD/CC
Unit II: Kanthapura-CC
Unit III: From Heaven Lake-JD
Unit IV: Poetry-PB

21-6-18

DIGBOI COLLEGE: DEPT. OF ENGLISH
Distribution of Syllabus (Jan-June,2019)

Semester II: English Major-201

Unit	Topic	Marks	Teacher
Unit I:	The Neo-classical period	16	JD
Unit II:	The Romantic period	16	CC
Unit III:	The Victorian period	16	SD
Unit IV:	The Twentieth century I(1900-1945): Theory & Poetry Drama & Fiction	16	PB GB
Unit V:	The Twentieth century II(1945-2000): Theory & Poetry Drama & Fiction	16	PB GB

Semester IV: English Major-401

Unit	Topic	Marks	Teacher
Unit I:	Bacon: Of Studies Addison: Sir Roger in London	20	PB PB
Unit II:	Lamb: Superannuated Man Orwell: Politics and the English Language	20	PB PB
Unit III:	Joseph Andrews	20	JD
Unit IV:	Mansfield Park	20	BRP

Semester IV: English Major-402

Unit	Topic	Marks	Teacher
Unit I:	The socio-political context of the English Novel	20	SD,GB
Unit II:	A Tale of Two cities	20	SD
Unit III:	Wuthering Heights	20	GB
Unit IV:	Sons and Lovers	20	CC

Semester VI English Major-601

Unit	Topic	Marks	Teacher
Unit I:	Preface to Lyrical Ballads	20	GB
Unit II:	Biographia Literaria	20	BRP
Unit III:	The Study of Poetry	20	SD
Unit IV:	Tradition and the Individual Talent Four Kinds of Meaning	20	JD JD

Semester VI English Major-602

Unit	Topic	Marks	Teacher
Unit I:	The Origins and reception of the Literature of the USA	15	BRP, JD,CC
Unit II:	Huckleberry Finn	20	GB
Unit III:	Desire Under the Elms	20	JD
Unit IV:	Poetry	25	CC

DIGBOI COLLEGE: DEPT. OF ENGLISH
Distribution of Syllabus (Jan-June,2019)

Semester II: General English

Unit	Topic	Marks	Arts Gr-A	Arts Gr-B+Science
I	The Last Leaf	14	GB	PB
	Under the Banyan Tree	13	BRP	SD
	An Indian in China	13	CC	JD
II	Pilgrimage to Tawang	13	GB	PB
	Reflections on Gandhi	13	BRP	SD
	Our Picture of the Universe	14	CC	JD

Semester II: Business Communication

Unit	Topic	Marks	Teacher
Unit I:	Report Writing:…..	20	GB
Unit II:	Oral Presentation……	20	GB
Unit III:	Non-verbal aspects of Communicating Body Language	20	CC
Unit IV:	Interviewing skills	20	SD

Semester II (Arts): Alt. English

Unit	Topic	Marks	Teacher
Unit I:	Vivekananda: The secret of work Aurobindo: The importance of Original Thinking	11 11	PB BRP
Unit II:	Ray: Film Making Coetzee: Playground	11 11	JD GB
Unit III:	Naipaul: Beginnings Ghosh: Books	11 11	BRP PB
Unit IV:	Critical appreciation of Prose/poetry	14	PB/BRP/GB

Semester IV (Arts): Alt. English

Unit	Topic	Marks	Teacher
Unit I:	The Old man and The Sea	30	CC
Unit II:	Tagore: A wife's Letter Rao: Javni	12.5 12.5	BRP BRP
Unit III:	Manto: Toba Tek Singh M. Devi: Kunti and the Nishadin	12.5 12.5	CC JD

DEPARTMENT OF HINDI

Course Distribution for the Session (May – November) 2018,

COURSE / UNIT	Dr. P K BHARATI	Dr. (Mrs.) A K SAHU
H.S.-I- MIL	Unit-I Apathit Bodh, Unit -III Gadya Khand & Vitan -1,	Unit -III Kavya Khand, Unit -II Rachanatmak Lekhan, Unit -IV-Moukhik Prikshan
H.S.-II –MIL	Unit -I Apathit Bodh, Unit -III Kavya Khand,	Unit -II Rachanatmak Lekhan or Jansanchar, Unit -III Gadya Khand & Vitan-2,
Sem.- I MIL	Unit -I Prachin & Madhya Kavya, Unit -II Aadhunik Kavya,	Unit – III Dhruvaswamini, (Novel) Unit - IV Jivan our Sahitya.
Sem.-I (Major)	Unit -II Poorv Madhya Kaal (Bhakti Kaal)1, Unit- III Poorv Madhya Kaal (Bhakti Kaal)2,	Unit- I Aadi Kaal, Unit- IV Aadhunik Kaal ,
Sem.-III (Elec.)	Unit-I Karyalayee Hindi, Unit-IV Patra Lekhan, Aalekhan & Tippan,	Unit- II Pallavan, Unit- III Anuvad,
Sem.-III MIL (Com.)	Unit -II Vigyapan, Unit -III Karyalayee Hindi,	Unit -I Gadya Katha Sansar, Unit-IV Anuvad
Sem. V (Elec.)	Unit-II Bharopiya Parivar, Prachin Bharatiya Arya Bhasha, Unit-III Aadhunik Bhartiya Arya Bhasha,	Unit- I Bhasha our Bhasha Vigyan, Unit- IV Devnagari Lipi, Lipi ka Manak Roop,

HOD (HINDI)
DIGBOI COLLEGE, DIGBOI

Course Distribution for the Session (January- May) 2019

Department of Hindi, Digboi College, Digboi.

COURSE / UNIT	Dr. P K BHARATI	Dr. (Mrs.) A K SAHU
H.S.-I- MIL Hindi	Unit -II Rachanatmak Lekhan, Unit-III Gadya Khand Unit -IV-Moukhik Prikshan,	Unit-I Apathit Bodh, Unit -III Kavya Khand & Vittan -1 ,
H.S.-I-Adv. Hindi	Unit -I Old Poetry, Unit –II Modern Poetry	Unit -III Kahani, Unit -IV-Nibandh, Unit –V History of Hindi Literature
Sem.-II –MIL Hindi	Unit -I Gadya Katha Aalok, Unit -IV Nibandh,	Unit -II Kali Aandhi, (Novel) Unit -III Vyakaran our Rachana,
Sem.-II Hindi (Major)	Unit -I Vidyapati, Surdas, Unit –II Kabirdas,	Unit - III Jayasi- Nagmati Virah Prasang, Unit – IV Bihari & Dev ,
Sem.- IV- MIL Hindi	Unit -I Vyavaharik Hindi, Unit -III Patra Lekhan,	Unit – II Anuvad, Unit - IV Sankshepan,
Sem.-IV- Elec. Hindi	Unit -III Asamiya Sahitya ka Parichayatmak Itihas, Unit- IV Vaishnavyug, Aadhunikyug,	Unit- I Aadikal, Bhaktikal, Rittikal, Aadhunikkal, Unit- II Chhayavad, Prayogvad, Pragativad, Nai Kavita,Upanyas, Kahani, Natak, Ekanki,
Sem.-VI- Elec. Hindi	Unit- I Alochana Ka Swaroop, Unit- II Hindi Alochana - Shukla & Dwevedi,	Unit-III Jan Sanchar Madhyam, Unit-IV Sanchar Madhyam Ke Vividh Roop,

HOD (HINDI)

DIGBOI COLLEGE, DIGBOI

Course Distribution: Digboi College, Deptt. of Mathematics, Session June-December, 2018-19

HS I Math	Sets & Functions	JC	**CMS I**	Unit I	MB
	Calculus	JC		Unit II	MB
	Algebra	MB		Unit III	JC
	Trigonometry	JL		Unit IV	KN
	C0-ordinate Geometry	JL		Unit V	JC
	Statistics	AD		Unit VI	JC
	Probability	KN		UnitVII	KN
	Mathematical Reasoning	AD		Unit VIII	MB
HS II	UNIT I	KN	**CMS II**	UNIT I	KN
	UNIT II	KN		UNIT II	JL
	UNIT III	MB		UNIT III	KN
	UNIT IV	JL		UNIT IV	JL
	UNIT V	JL		UNIT V	JL
	UNIT VI	JC		UNIT VI 6.1	KN
				UNIT VI 6.2	JL
SEM I (M)	(A) Unit I-Real Sequences	AD	**SEM I (P)**	(A) Unit I-Real Sequences	AD
	UNIT II-Infinite Series	KN		UNIT II-Infinite Series	KN
	UNIT III -Theory of Equations	JC		UNIT III -Theory of Equations	JC
	(B) Trigonometry	MB		(B) Trigonometry	MB
	© Vector Calculus	JL		(C) Vector Calculus	JL
SEM III (M)	**Paper-MM301**		**SEM III(P)**	(A) 2D	JC
	(A) Differential Calculus			(A) 3D	AD
	UNIT I & II	MB		(B) Analysis I	
	UNIT III	KN		UNIT-I & II	MB
	UNIT IV	JL		UNIT- III & IV	KN
	(B) Integral Calculus	KN			
	(C) Riemann Integral	AD			
	Paper-MM302				
	(A) Co-ordinate Geometry				
	2D	JC			
	3D	AD			
	(B) Algebra -I				
	UNIT- I	KN			
	UNIT-II	MB			
SEM V(M)	**Paper-MM501**		**SEM V(P)**	Analysis-II	
	Logic & Combinatories	JC		(Complex Analysis)	JC
	Complex Analysis	JC		Mechanics	
	Paper-MM502			Statics	AD
	Linear Algebra	MB		Dynamics	KN
	Number Theory	MB			
	Paper-MM503				
	Fluid Mechanics	JL			
	Paper-MM504				
	Statics	AD			
	Dynamics	KN			
	Integral Transform	AD			

1. DR. A.C.DEKA(AD)
2. PROF. K.N. TIMSINA(KN)
3. DR. J. CHANGMAI(JC)
4. DR. J. LAHKAR(JL)
5. PROF. M. BURAGOHAIN(MB)

Dr. J. Changmai
HoD, Maths

Course Distribution:: Dept. of Mathematics, Digboi College, Session January_May, 2019 wef 02.01.2019

Class	Subject	Teach	Marks	Class	Units	Teacher	Marks
HS I Math	Unit-I: Set, Relations & Functions	JC	18	**HS 1 Math**	Unit-I: Set, Relations & Functions	JC	18
SC	Unit-V:Mathematical reasoning	JC	3	Com	Unit-V:Mathematical reasoning	JC	3
	Unit-II:Binomial Theorem	MB	10		Unit-II:Binomial Theorem	MB	10
	Unit-IV:Calculus	MB	6		Unit-IV:Calculus	MB	6
	Unit-VI:Statitics	MB	6		Unit-VI:Statitics	MB	6
	Unit-I:Trigonometry	JL	11		Unit-I:Trigonometry	JL	11
	Unit-III: Coordinate geometry	JL	13		Unit-III: Coordinate geometry	JL	13
	Unit-II: Mathematical inductuion,Linear inequalities, Permutation Combination	JK	20		Unit-II: Mathematical inductuion,Linear inequalities, Permutation Combination	JK	20
	Unit-II: Complex Nos., Quadratic Equation, Sequences & Series	KT	7		Unit-II: Complex Nos., Quadratic Equation, Sequences & Series	KT	7
	Unit-VI:Probability	KT	6		Unit-VI:Probability		6
SEM II (M)	COURSE CODE:MM201			**SEM II (P)**	COURSE CODE:NM201		
	(A) Marices	KT	20		(A) Marices	KT	20
	(B) Ordinary Differential Equations	MB	30		(B) Ordinary Differential Equations	MB	30
	(C) Numerical Analysis	JK	30		(C) Numerical Analysis	JK	30
SEM IV (M)	**COURSE CODE:-MM401**			**SEM IV(P)**	**COURSE CODE:-NM401**		
	(A)C-PROGRAMMING	JL	50		(A) Linear Prog . Problem	JL	50
	(B) COMPUTER LAB	JL	30		(B) COMPUTER LAB	JL	30
	(C-Programming, Matlab)				(Matlab, Mathematica)		
	COURSE CODE:-MM402						
	(A) Linear Prog. Problem	JL	45				
	(B) Analysis -II(Multiple Integral)	JK	35				
SEM VI(M)	**Paper-MM601**			**SEM VI(P)**	**Paper-NM601**		
	(A)Metric Space	KT	40		(A) Discrete mathematics	JC	45
	(B)Statistics	JC	40		(B)Metric Space	KT	35
	Paper-MM602						
	(A) Discrete mathematics	JC	45				
	(B) Graph Theory	MB	35				
	Paper-MM603						
	(A) Algebra II	MB	40				
	(B) Partial Differential Equation	JK	40				
	Paper-MM604(GR.B)						
	(A) Space Dynamics	KT	40				
	(B) Relativity	JL	40				

1. PROF. K.N. TIMSINA(KT)
2. DR. J. CHANGMAI(JC)
3. DR. J. LAHKAR(JL)
4. PROF. M. BURAGOHAIN(MB)
5. DR JADAV KONCH(JK)

Dr. J. Changmai
HoD, Maths

DEPARTMENT OF PHILOSOPHY

COURSE DISTRIBUTION *SESSION: 2018—19(I)*

Dr. I. DAS: I SEM. (M), 101 (INDIAN PHILOSOPHY-I),FULL PAPER
V SEM. (p), 501 (INDIAN & WESTERN LOGIC), UNIT: I,III & V
V SEM. (M), 502 (WESTERN LOGIC), FULL PAPER
V SEM. (M), 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: I & II
H.S-I, UNIT: I & II
H.S-II, UNIT I & III

Mr. B. NARZARY: III SEM. (M), 301 (WESTERN PHILOSOPHY), FULL PAPER
III SEM. (P), 301(INDIAN PHILOSOPHY-II), UNIT: I, II & IV
V SEM. (M), 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: II & III
V SEM. (M), 504 (PHILOSOPHY OF RELIGION), FULL PAPER
H.S –I, UNIT: VII & VIII
H.S- II, UNIT: VII & VIII

Dr. R. SARMAH: I SEM. (P), 101 (INDIAN PHILOSOPHY-I), FULL PAPER
III SEM. (M), 301 (INDIAN PHILOSOPHY-II), FULL PAPER
V SEM. (M), 501 (INDIAN LOGIC), FULL PAPER
V SEM. (M), 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: IV
H.S-I, UNIT: V & VI
H.S-II, UNIT: V & VI

Mr. D. RIMAL: III SEM. (P), 301 (INDIAN PHILOSOPHY-II), UNIT: III, IV & V
V SEM. 503 (HISTORY OF WESTERN PHILOSOPHY), UNIT: V
V SEM. (P), 501 (INDIAN AND WESTERN LOGIC), IV & V
H.S-I, UNIT: III &IV
H.S-II, UNIT: II & IV

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DEPARTMENT OF PHILOSOPHY

COURSE DISTRIBUTION *SESSION: 2018—19(II)*

Sl. No.	Name	Course allotted	No. of class allotted (weekly)	Remarks
1	**Dr. Itu Das**	(a) M-401(Indian Ethics, Full P) (b) M-604(Psychology Full P) (c) M-603(Social and Political Philosophy, Unit: I & II) (d) NM-601(Social Philosophy & Psychology, Unit: I, II & III) (e) HS-I(unit: I & II)	06 06 02 03 01	
2	**Mr. Bisti Ram Narzary**	(a) NM-201(Western Philosophy, Unit: I,II & III) (b) M-402(Western Ethics Full P) (c) M-602(Contemporary Western Philosophy Full P) (d) M-603(Social and Political Philosophy, Unit: III & IV) (e) HS-I(Unit: VII & VIII)	03 06 06 02 01	
3	**Dr. Reepa Sarmah**	(a) M-201(Western Philosophy, Full P) (b) NM-401(Western Philosophy-II, Unit: I II & III) (c) M-601(Contemporary Indian Philosophy, Full P) (d) M-603(Social and Political Philosophy, Unit: IV & V) (e) HS-I(Unit: V & VI)	06 03 06 02 01	
4	**Mr.Dipendra Rimal**	(a) NM-201(Western Philosophy-I, Unit: III, IV & V) (b) NM-401(Western Philosophy-II, Unit: III, IV & V) (c) NM-601(Social Philosophy & Psychology, Unit: III, IV & V) (d) HS-I(Unit: III & IV)	03 03 03 03	

1. Dr. Itu Das
2. Mr. Bisti Ram Narzary
3. Dr. Reepa Sarmah
4. Mr. Dipendra Rimal

Department of Physics, Digboi College

Course Distribution

From July to December 2018

(Odd Semester)

B. SC. 1st SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 101	Mechanics and Properties of Matter	Dr K Konwar Dr P Basyach

B. SC. 1st SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 101	Mechanics and Thermodynamics	Dr K Konwar Dr P Basyach

B. SC. 3rd SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 301	Optics	Dr R Patowary
PHYM - 302	Electricity & Magnetism	Dr P Basyach Dr K Konwar
PHYM - 303	Laboratory	Dr P Basyach

B. SC. 3rd SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 301	Electricity, Magnetism and Electromagnetic Theory	Dr K Konwar Dr P Basyach

B. SC. 5th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 501	Mathematical Physics II	Dr R Patowary
PHYM - 502	Electrodynamics & Special Relativity	Dr P Basyach
PHYM - 503	Atomic & Molecular Physics	Dr S Bhuyan
PHYM - 504	Electronics	Dr K Konwar
PHYM - 505	Laboratory	Dr K Konwar

B. SC. 5th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 501	Atomic and Nuclear Physics	Ganesh Debnath

M. SC. 1st SEMESTER (NCBCS) (3rd Batch)

Paper Code	Title	Name of Faculty
PH-10100	Mathematical Physics	Dr R Patowary
PH-10200	Classical Mechanics	Dr K Konwar
PH-10300	Quantum Mechanics - I	Deep Kr Kuri
PH-10400	Electrodynamics and Fluid Dynamics	Dr P Basyach
PH-10500	Laboratory	Dr K Konwar

M. SC. 3rd SEMESTER (NCBCS) (2nd Batch)

Paper Code	Title	Name of Faculty
PH-30100	Atomic and Molecular Physics	Dr K Konwar Deep Kr Kuri
PH-30200	Computational Physics	Dr R Patowary
PH-30300	Nano Structured Material	Dr P Basyach
PH-30400	Vacuum Techniques	Parvind Sahu
PH-30530	Digital Electronics	Dr K Konwar Satish Gupta
PH-30540	Condensed Matter Physics: Electronic Properties of Solids	Dr Sumi Bhuyan
PH-30610	Laboratory Condensed Matter Physics-I	Dr S Bhuyan Parvind Sahu
PH-30610	Laboratory Electronics-I:	Dr K Konwar

Department of Physics, Digboi College
Course Distribution
From January to June 2019
(Even Semester)

B. SC. 2nd SEMESTER (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 201	Thermal Physics & Waves and Oscillation	Dr K Konwar Dr. P Basyach
PHYG - 201	Optics	Dr R Patowary
PHYG - 202	Practical-I	Ganesh Debnath

B. SC. 4th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 401	Mathematical Physics I	Dr R Patowary
PHYM - 402	Quantum Mechanics	Dr K Konwar Dr P Basyach
PHYM - 403	Laboratory	Dr K Konwar Ganesh Debnath

B. SC. 4th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 401	Quantum Mechanics & Mathematical Physics	Dr K Konwar Dr P Basyach
PHYG - 402	Practical-II	Dr K Konwar

B. SC. 6th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 601	Statistical Mechanics	Dr P Basyach
PHYM - 602	Condensed Matter Physics	Dr S Bhuyan
PHYM - 603	Nuclear Physics	Dr R Patowary
PHYM - 604	Laser and its Application	Dr K Konwar
PHYM - 605	Laboratory	Dr K Konwar

B. SC. 6th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 601	Electronics & Solid state Physics	Dr K Konwar
PHYG - 602	Practical -III	Dr K Konwar

M. SC. 2nd SEMESTER (NCBCS) (3rd Batch)

Paper Code	Title	Name of Faculty
PH-20100	Quantum Mechanics II	Dr S Bhuyan
PH-20200	Nuclear and Particle Physics	Dr R Patowary
PH-20300	Condensed Matter Physics	Dr P Basyach
PH-20400	Electronics	Dr. K Konwar
PH-20500	Laboratory	Dr K Konwar

M. SC. 4th SEMESTER (NCBCS) (2nd Batch)

Paper Code	Title	Name of Faculty
PH-40100	Statistical Mechanics	Dr. P Basyach
PH-40200	Plasma Physics	Dr R Patowary
PH-40300	Meteorology	Dr R Patowary
PH-40400	Observational Astronomy	Ganesh Debnath
PH-40530	Communication Electronics	Dr K Konwar
PH-40540	Condensed Matter Physics: Lattice Vibrations and Semiconductor Physics	Dr S Bhuyan
PH-40610	Laboratory Condensed Matter Physics-II	Dr S Bhuyan
PH-40610	Laboratory Electronics-II	Dr K Konwar

DEPARTMENT OF ZOOLOGY

SYLLABUS DISTRIBUTION: I / III / V SEMESTERS OF MAJOR AND GENERAL COURSE SESSION: 2018 – 2019

MR. SWAPNIL BHOWAL, ASSISTANT PROFESSOR

SEMESTER I MAJOR

PAPER : ZOOMT:101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION MARKS: 12 IA+ 48 = 60

UNIT -1: PROTOZOA – General characters and classification upto orders with examples; Locomotion, nutrition and reproduction in Protozoa.

UNIT-2: HELMINTHES – General characters and classification upto orders with examples

UNIT-5: Modern concept in Taxonomy (Molecular, Chemotaxonomy).

ZOOMP : 102 MARKS : 8 IA + 32 =40

1. Dissection of digestive and nervous system of cockroach.
2. Identification of laboratory specimens as per syllabus
3. Preparation of permanent slides & mounting of minimum five suitable non-chordate specimens & their submission

SEMESTER I GENERAL

ZOOGT : 101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION MARKS: 12 IA+ 48 = 60

UNIT -1: PROTOZOA: Locomotion, nutrition and reproduction in Paramoecium and Leishmania

UNIT -2: Platyhelminthes & Nenathelminthes : Life cycle of Ascaris and Taenia, Reproduction and Parasitic adaptation.

UNIT –5: Concept of species & speciation; Origin of life on earth.

ZOOGP : 102 MARKS : 8 IA + 32 =40

1. Dissection of digestive and nervous system of cockroach.
2. Identification of laboratory specimens as per syllabus
3. Preparation of permanent slides from suitable non-chordate specimens

SEMESTER III MAJOR

ZooMT : 301 CHORDATE DIVERSITY AND COMPARATIVE ANATOMY MARKS : 12(IA)+48=60

UNIT -1: (Entire) General characters of chordates and classification upto class, claasification of protochordata upto orders, general characters of hemichordate, urochordata and cephalochordate, larval forms and their significance in chordate phylogeny, affinities of protochordates.

UNIT -5: Comparative anatomy of pectoral and pelvic girdles of tetrapoda; comparative account of alimentary system in reptiles, birds and mammals.

ZooMP : 302 MARKS : 8(IA)+32=40

1.DISSECTION- Efferent branchial system of Scoliodon, IX & X cranial nerves of Scoliodon

2. IDENTIFICATION – Vertebrate specimens

3. PREPARATION OF PERMANENT SLIDES –Vertebrate exoskeletons – feather, scales etc.

4. STUDY OF BONES- Pectoral and Pelvic girdles of Amphibia.

ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS 12(IA)+48=60

UNIT-4: Principles and uses of kymography, microtomy and ultramicrotomy.

ZooMP -304 MARKS : 8(IA)+32=40

1.Separation of chlorophyll by paper chromatography.

2.Demonstration of instruments as prescribed in the syllabus

SEMESTER III GENERAL :

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY MARKS : 12(IA)+48=60

UNIT-1: General characters of chordates; Protochordates; classification up to orders, structural organization of Hemichordates, Urochordates.

UNIT-4: Fertilization – types and mechanism ; Parthenogenesis.
ZooGP – 302 MARKS : 8(IA)+32=40
1.DISSECTION – External morphology, Efferent branchial system of Scoliodon.
2.IDENTIFICATION – Vertebrate specimens.
3. Preparation of permanent slides
4. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR
ZooMT-501 GENETICS AND EVOLUTION MARKS : 12(IA)+48=60
UNIT -2: Determination of sex, Sex linked inheritance, Cytoplasmic Inheritance.
UNIT -4: Origin of life (chemical & biological origin); variation – types and sources; isolation; speciation (sympatric, allopatric and peripatric); fossil and fossilization.
ZooMP – 502 MARKS : 8(IA)+32=40
1.Study of materials/ organisms of evolutionary significance (Rocks, Fossil and Connecting links).
ZooMT -503 ANIMAL PHYSIOLOGY MARKS : 12(IA)+48=60
UNIT -2: (Entire) Digestion – site and sequence of digestion; digestive secretions and their regulation; mechanism of digestion and absorption of carbohydrates, proteins and lipids; role of gastro-intestinal hormones; balanced diet.
UNIT -3: (Entire) Excretion – structure and function of nephron ; renal blood supply, mechanism and regulation of urine formation, renal failure and dialysis.
ZooMP – 504 MARKS : 8(IA)+32=40
1.Qualitative test of salivary amylase.
2. Recording of heart beat by kymograph
8. RBC and WBC counting by haemocytometer.
ZooMT- 505 ENVIRONMENTAL BIOLOGY AND WILDLIFE MARKS : 12(IA)+48=60
UNIT-3: Biogeochemical cycles – phosphorus & hydrological cycles. Renewable and non-renewable resources of NE India & strategy for their sustainable utilization.
Unit -4: Air & soil pollution
ZooMP – 506 MARKS : 8(IA)+32=40
1. Determination of dissolved oxygen / alkalinity in the water samples.
2. Field study
3. Project Work (Project topics should be discussed and distributed among faculty members)
ZooMT – 507 : ENDOCRINOLOGY MARKS : 12(IA)+48=60
UNIT -1: Comparative anatomy of pancreas in Fish, Amphibia, Birds and Mammals.
UNIT -2: Hormones secreted by pancreas and their function in mammals.
UNIT -3: (Entire) General characters of hormones, mechanism of action of hormones, regulation of hormone secretion, hypothalamo-hypophyseal system, disorders associated with hypo & hyper secretion of hormones.
ZooMP – 508 MARKS : 8(IA)+32=40
1. Histological preparation of thyroid gland.
2. Dissection of thyroid gland of fish/bird
3. Study of permanent slides of endocrine glands.
4. Submission of charts / models related to endocrinology

SEMESTER V GENERAL
ZooGT- 501 : GENETICS AND MOLECULAR BIOLOGY MARKS : 12(IA)+48=60
UNIT- 4: Concept of central dogma, genetic code, basic steps of transcription and translation ZooGP – 502 MARKS : 8(IA)+32=40
1. Preparation of nucleotides using ball and stick model.
2. Preparation of slides of meiosis using suitable materiALS

DR. KISHOR HALOI, ASSISTANT PROFESSOR

ZOOMT:101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION
MARKS: 12 IA+ 48 = 60

UNIT-2: ANNELIDA : General characters and classification upto orders with examples; Excretion, Reproduction and importance of Pheretima; Coelom and Metamerism in Annelids.
UNIT-3: ARTHROPODA: General characters and classification upto orders with examples; Mouth parts of insects; Larval forms in crustaceaa; Digestion, excretion & vision in Arthropoda; Affinity of Onychophora.
UNIT-5: SYSTEMATICS: Nomenclature – rules of Zoological nomenclature.
ZOOMP: 102 MARKS: 8IA+32=40
1. Dissection of Urinogenital system of earthworm
2. Identification of Invertebrate laboratory specimens

SEMESTER I GENERAL
ZOOGT : 101 NON-CHORDATE DIVERSITY, SYSTEMATICS AND EVOLUTION
MARKS: 12 IA+ 48 = 60

UNIT-3: ANNELIDA: Coelom & excretion in Annelida; ARTHROPODA: Mouth parts & legs in insects; crustacean larval forms, social life in honey bee.
UNIT-5: Concept of evolution, evolutionary theories.

ZOOGP: 102 MARKS: 8IA+32=40
1. Dissection of urinogenital system of leech
2. Identification of Invertebrate laboratory specimens
3. Preparation of permanent slides from suitable invertebrate animal.

SEMESTER III MAJOR
ZooMT – 301: CHORDATE DIVERSITY AND COMPARATIVE ANATOMY
MARKS :12(IA)+48=60

UNIT-4: General characters & classification of Aves - - - to - - migration in birds.
UNIT-5: Comparative anatomy of integument of fish, reptile and mammals. Comparative anatomy of brain & cranial nerves in amphibia and mammals.
ZooMP - 302 MARKS : 8(IA)+32=40
1.Dissection –Efferent branchial system of Scoliodon, Weberian ossicles of carp /catfish
2.Identification of vertebrate specimens.
3.Preparation of permanent slides.
4. Study of vertebral columns of mammals; pectoral pelvic girdles of reptiles.
ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS MARKS: 12(IA)+48=60
UNIT-3: Photometry – principle and uses of colorimeter & spectrophotometer.
UNIT-5: Measures of statistical average ---- to --- Significance test (t, F and chi-square test).
ZooMP-304 MARKS : 8(IA)+32=40
1.Separation of chlorophyll by paper chromatography.
2.Demonstration of instruments as prescribed in the syllabus.
3. Statistical calculations – central tendency, deviations, correlation, regression & t test.

SEMESTER III GENERAL
ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY
MARKS: 12(IA)+48=60

UNIT-3: Aves – classification up to super-orders - - - to - - - bird migration.

UNIT-4: Gametogenesis – spermatogenesis, types of animal eggs, vitellogenesis, egg membranes.
ZooGP : 302 MARKS : 8(IA)+32=40
1.Dissection- Efferent branchial system of Carp fish
2.Preparation of permanent slides of suitable vertebrate material.
3. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR
ZooMT-501 GENETICS AND EVOLUTION MARKS : 12(IA)+48=60
UNIT-2: Linkage --- to --- gene mapping.
UNIT-3: (Entire) Concept of gene --- to ---- Human genome project.
ZooMP-502 MARKS : 8(IA)+32=40
1.Study of chromosomal slides of suitable material.
4.Study of materials / organisms of evolutionary significance (rocks, fossils and connecting links)
ZooMT-503 ANIMAL PHYSIOLOGY MARKS : 12(IA)+48=60
UNIT-4: (Entire) Circulation – coronary circulation ---- to ---- tracheal respiration in insects.
ZooMP-504 MARKS : 8(IA)+32=40
1.Determination of R. Q. Of cockroach/Goroi fish
2.Preparation of haemin crystal
3.R.B.C. and W.B.C. counting by haemocytometer.
ZooMT- 505 ENVIRONMENTAL BIOLOGY AND WILDLIFE 12(IA)+32=40
UNIT-1: (Entire) Concepts pertaining to ecosystem --- to --- energy flow.
UNIT-2: (Entire) Shelford's Law of tolerance ---- to--- predator –prey relationships.
UNIT -3: Nitrogen cycle.
ZooMT-506 MARKS:8(IA)+32=40
1.Find out the abundance and density of insect pests in some essential food commodities.
2. Field study
3. Project work (to be evaluated in semester VI , should be discussed and distributed among the faculty members).

ZooMP-507 ENDOCRINOLOGY MARKS :12(IA)+48=60
UNIT-1: Comparative anatomy of Pituitary in Fish, Amphibia, Bird and Mammals.
Unit -2: Hormones secreted by pituitary gland and their function in mammal.
UNIT-5: (Entire) Neuroendocrine system in insects; role of hormones in growth and development of insects.
ZooMP-508 PRACTICAL MARKS:8(IA)+32=40
1.Histological preparation of thyroid gland.
2.Dissect and display of Pituitary & adrenal gland of fish/bird
3.Study of permanent slides of endocrine glands.

SEMESTER V GENERAL
ZooGT- 501 GENETICS AND MOLECULAR BIOLOGY MARKS: 12(IA)+48=60
UNIT-2: (Entire) Concept of gene .....
UNIT-5: Basic steps in gene cloning; cloning vectors.
ZooGP-502 PRACTICAL MARKS : 8(IA)+32=40
1. Preparation of slides of mitosis and meiosis using suitable material
2. Construction of nucleotides using ball and stick model.

MR. RAJIB RUDRA TARIANG, ASSISTANT PROFESSOR

SEMESTER I MAJOR
ZOOMT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION
MARKS : 12IA + 48=60
UNIT-1: PORIFERA : General characters and classification upto orders with examples; Skeletal and Canal systems in Sycon. COELENTERATA : General characters and classification upto orders with examples; Polymorphism and Defensive mechanism in coelenterate, Coral reefs and their formation.
UNIT-5: Modern concept in Taxonomy (Numerical & Cytotaxonomy)
ZOOMP:102 MARKS: 8IA + 32=40
1. Dissection –Nervous system of Pila / Acatina , Reproductive system of cockroach
2. Identificatiopn of Invertebrate specimens as per the syllabus.
3. Study of Morphotaxonomy of locally available animals.

SEMESTER I GENERAL
ZOOGT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION
MARKS : 12IA + 48= 60
UNIT-1: NON-CHORDATES – Salient features and classification upto classes of different phyla.
UNIT-2: PORIFERA & COELENTERATA – Canal system in Porifera; Coral and coral reefs.
UNIT-5: Variation, mutation, recombination, isolation and natural selection, adaptive radiation.
ZOOGP: 102 MARKS: 8IA + 32=40
1. Dissection – digestivesystem of Pila/Acatina
2. Identification of Invertebrate specimens
3. Preparation of permanent slides of suitable invertebrate animals.

SEMESTER III MAJOR
ZooMT – 301: CHORDATE DIVERSITY AND COMPARATIVE ANATOMY
MARKS:12IA + 48=60
UNIT- 2: (Entire)- Distinctive characters of Petromyzontia --- to --- parental care in fish.
UNIT - 3: Distinctive characters and classification of Reptilia upto order with example --- to ---- biting mechanisms of poisonous snakes.
Unit-5 : Comparative account of reproductive systems of reptiles, birds and mammals.
ZooMP- 302 MARKS : 8(IA)+32=40
1.DISSECTION – Internal ear of Scoliodon.
2.IDENTIFICATION
3.DEMONSTRATION of Digestive , Circulatory and Respiratory and Urinogenital systems of Reptiles, Birds & Mammals through electronic media.
ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS MARKS:12(IA)+48=60
UNIT -2: (Entire) Microscopy ----
UNIT-4: Principles and practices of centrifugation; autoradiography.
ZooMP-304 MARKS : 8(IA)+32=40
1.Demonstration of instruments as prescribed in the syllabus.
SEMESTER III GENERAL
ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY 12(IA)+48=60
UNIT-2: Reptilia : Classification upto orders --- to --- Biting mechanism.
UNIT-3: Mammalia: Classification upto orders; dentition in mammals.

UNIT-5: Extra embryonic membranes; types and physiology of placenta.
ZooGP : 302 MARKS : 8(IA)+32=40
1.DISSECTION – Internal ear of Scoliodon
2.IDENTIFICATION – Vertebrate specimens
3.Study of Chick embryo upto 72 hrs of development by permanent slides.

SEMESTER V MAJOR
ZooMT-501 GENETICS AND EVOLUTION MARKS : 12(IA)+48=60
UNIT -4: Evidences of theories of evolution - - - to - - - Modern synthetic theory.
UNIT-5: Concept of population - - - to - - gene frequency (Genetic drift, gene flow, genetic load).
ZooMP- 502 MARKS : 8(IA)+32=40
1.Polytene chromosome of Chironomus or Drosophila larvae.
ZooMT- 503 ANIMAL PHYSIOLOGY MARKS : 12(IA)+48=60
UNIT- 5: (Entire) Nervous system – neurons --- -- to ---social implications.
ZooMP- 504 MARKS : 8(IA)+32=40
1.Determination of R.Q. of cockroach/goroi fish
2.Demonstration of knee-jerk reflex
3.Demonstration of osmosis using toad/frog urinary/ alimentary canal.
ZooMT- 505 ENVIRONMENTAL BIOLOGY & WILDLIFE MARKS: 12(IA)+32=40
UNIT-3: Biogeochemical cycles – carbon cycle; Basic concept of remote sensing and EIA.
UNIT -4: Ozone layer depletion and its impact.
UNIT-5: IUCN status of species category ----- to ----- Golden mahaseer ; Major National Parks of N.E.India - - - to - - Wildlife Protection Act, 1972.
ZooMP-506 MARKS: 8(IA)+32=40
1. Estimation of size of population by capture recapture method.
2. Study of structural components of an aquatic / grassland ecosystem.
3. Field study
4. Project Work (Project topics should be discussed and distributed among faculty members).
ZooMT-507: ENDOCRINOLOGY MARKS :12(IA)+48=60
UNIT-1: Comparative anatomy of Adrenal gland of fish, amphibian, bird and mammals.
UNIT-2: (Entire) Hormones secreted by adrenal gland & their function in mammal.
ZooMP-508 MARKS : 8(IA)+32=40
1.Histological preparation of adrenal gland .
2.Dissect and display adrenal/pituitary gland in fish/bird.
3. Study of permanent slides of endocrine glands.

SEMESTER V GENERAL
ZooGT- 501 : GENETICS AND MOLECULAR BIOLOGY MARKS:12(IA)+48=60
UNIT-3: (Entire) Nucleic acids .....
UNIT-5: Genetic engineering, Restriction enzymes.
ZooGP-502 MARKS : 8(IA)+32=40
1.Preparation of slides for study of mitosis and meiosis using suitable material.

MRS. APARAJITA GOGOI, ASSOCIATE PROFESSOR H.O.D.

SEMESTER I MAJOR
ZOOMT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION
MARKS : 12IA + 48=60
UNIT -4: MOLLUSCA –Genaral characters and classification upto orders with example; Digestive, respiratory and excretory system of Pila; Shell diversity, torsion and detorsion in Mollusca. ECHINODERMATA - Genaral characters and classification upto orders with example; Water vascular system in starfish, echinoderm larvae.
UNIT-5: Systematics and classification, form and hierarchy of classification; modern species concept.
ZOOMP: 102 MARKS: 8IA + 32 =40
1.Dissection of nervous system of Prawn
2.Identification of Invertebrate specimens
3. Preparation of permanent slides of minimum five suitable invertebrate animals.

SEMESTER I GENERAL
ZOOGT: 101 NON-CHORDATE DIVERSITY, SYSTEMATICS & EVOLUTION
MARKS : 12IA + 48=60
UNIT-4: MOLLUSCA- Torsion and detorsion in gastropoda, economic importance of mollusc; ECHINODERMATA – Feeding and locomotion in starfish.
UNIT-5: Systematics – Definition, classification and its hierarchy; Concept of species and speciation
ZOOGP:102 MARKS: 8IA + 32 =40
1.Dissection of digestive system of cockroach
2. Identification of invertebrate specimens
3. Preparation of permanent slides of suitable invertebrate animals.

SEMESTER III MAJOR
ZooMT – 301: CHORDATE DIVERSITY AND COMPARATIVE ANATOMY
MARKS:12(IA)+48=60
UNIT-3:Distinctive characters and classification of Amphibia upto orders with example; parental care, metamorphosis and neoteny in Amphibia.
UNIT- 4:Mammalia
Unit-5: Comparative account of circulatory system in reptiles, birds and mammals.
ZooMP-302 PRACTICAL 8(IA)+32=40
Dissection – 9^{th} and 10^{th} cranial nerves of Scoliodon
1.Identification of vertebrate specimens.
2.Preparation of permanent slides (five minimum slides of vertebrate exoskeleton –scale, feather etc)
3.Study of pectoral and pelvic girdles of bird.
ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS MARKS: 12(IA)+48=60
UNIT-1:(Entire) Chromatography
UNIT-5: Scope and utility of statistics in Bioscience --- to --- representation of data.
ZooMP – 304 MARKS : 8(IA)+32=40
1.Demonstration of instruments prescribed in the syllabus.
SEMESTER III GENERAL
ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY
MARKS:12(IA)+48=60
UNIT-1: Fishes – classification upto orders, respiratory organs and migration.

UNIT-2: Amphibia- classification upto orders, parental care.
UNIT-5: Patterns of cleavage ---- to ---- cell linage.
ZooGP-302 PRACTICAL MARKS: 8(IA)+32=40
1.Dissection – Afferent branchial system of Scoliodon.
2.Identification as per syllabus. 3. Preparation of permanent slides. 4. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR
ZooMT-501 GENETICS AND EVOLUTION MARKS:12(IA)+48=60
UNIT-1:(Entire)- Mendel's Law of Inheritance.....
UNIT-5: Continental drift --- to --- adaptive radiation
ZooMP-502 MARKS **:** 8(IA)+32=40
1.Simple calculation based on Mendel's mono /dihybrid cross.
ZooMT- 503 ANIMAL PHYSIOLOGY MARKS: 12(IA)+48=60
UNIT-1: Entire – Muscle and its contraction.....
ZooMP – 504 MARKS:8(IA)+32=40
1.Recording of heart beat of frog by kymograph.
2.Qualitative test of salivary amylase.
ZooMT – 505 ENVIRONMENTAL BIOLOGY AND WILD LIFE MARKS:12(IA)+48=60
UNIT-4: Environmental pollution – (water)—and bioindicators of pollution studies --- to – greenhouse effect
UNIT- 5: Threats to biodiversity --- to --- ex-situ & in-situ conservation strategies.
ZooMP – 506 PRACTICAL MARKS:8(IA)+32=40
4. Find out abundance and densities of terrestrial invertebrates / macrophytes associated fauna by quadrate method.
6. Field study
7. Project work (to be evaluated in VI semester) should be discussed and distributed among the faculty members.
ZooMT – 507 ENDOCRINOLOGY MARKS:12(IA)+48=60
UNIT-1: Comparative anatomy of thyroid in fish, amphibian, bird and mammal.
UNIT -2: Hormones secreted by thyroid gland & their function in mammals.
UNIT-4: (Entire) – Roles of hormones in reproductive cycle, pregnancy, parturition and lactation; methods of contraception; amniocentesis and IVF.
ZooMP – 508 MARKS: 8(IA)+32=40

1. Histological preparation of gonads.
2. Dissection & display of thyroid gland of fish/ bird.
3. Submission of chart / model of endocrinology.

SEMESTER V GENERAL
ZooGT- 501 GENETICS AND MOLECULAR BIOLOGY MARKS: 12(IA)+48=60
UNIT -1:(Entire) - Principles of heredity; Mendel's laws; linkage and crossing over; non-chromosomal inheritance; sex determination in animals.

ZooGP – 502 MARKS : 8(IA)+32=40
1.Mendelian problems on monohybrid and dihybrid cross.

COURSE DISTRIBUTION OF SEMESTER II, IV & VI (MAJOR & GENERAL):2018 (JANUARY)

MR. SAIBAL DEV, ASSOCIATE PROFESSOR

SEMESTER II MAJOR
PAPER ZooMT - 201 (THEORY) BIOCHEMISTRY - MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: (Entire unit) Laws of thermodynamics ------- buffers.
UNIT 2: Structure and classification of lipids.
PAPER ZooMP – 202 (PRACTICAL) MARKS: 8 (IA) + 32 (END SEM) = 40
4. Estimation of Ascorbic acid in lemon/milk.
5. Separation of amino acids using paper chromatography.

SEMESTER II GENERAL - PAPER-ZooGT-201(THEORY) CELL BIOLOGY AND BIOCHEMISTRY MARKS: 12(IA) + 48(END SEM) = 60
UNIT 3: Cell division (amitosis, mitosis, meiosis).
UNIT 4: Basic principles of biochemistry, acid, base, pH and buffers; types of fats.
UNIT 5: Biological oxidation, glycolysis and Kreb's cycle.
PAPER ZooGP – 202 (PRACTICAL) MARKS: 8 (IA) + 32 (END SEM) = 40
1. Study of mitosis and meiosis with the help of permanent slides.
4. Qualitative test of protein and fat.
5. Qualitative test of salivary amylase.

SEMESTER IV MAJOR
PAPER – ZooMT : 401 (THEORY) CELL BIOLOGY, HISTOLOGY & HISTOCHEMISTRY
MARKS: 12(IA) + 48(END SEM) =60
UNIT 1: Structure and function of lysosome and ribosome.
UNIT 3: (Entire unit) - Cell cycle – molecular events in different phases, regulation of cell cycle normal and malignant cell growth; cell division (mitosis & meiosis); programmed cell death (apoptosis).
UNIT 5: Histological structure of muscles and epithelium.
PAPER – ZooMP : 402 (PRACTICAL) MARKS : 8 (IA) + 32 (END SEM) = 40
3. a) Histochemical localization of – General lipid by Sudan black B method.
b) Metachromatic substances by Toluidene blue method.
4. Histological Preparation of vertebrate tissue – liver stomach, intestine, kidney, pancreas, testes and ovary and submission of slides.
PAPER – ZooMT : 403 (THEORY) DEVELOPMENTAL BIOLOGY
MARKS : 12(IA) + 48(END SEM) = 60
UNIT 1: (Entire) – Gametogenesis – formation of gametes (spermatogenesis; oogenesis); structure, maturation and growth of sperm and ovum; vitellogenesis.
PAPER – ZooMP : 404 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
1. Study of permanent slides of different embryonic stages of frog/toad.
3. Submission of permanent stained preparation of at least two stages upto 72 hrs. development stages of chick embryo.

SEMESTER IV GENERAL
PAPER ZooGT – 401 (THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY
MARKS : 12 (IA) + 48(END SEM) = 60
UNIT 1. Balanced diet; digestion and absorption of carbohydrate.
UNIT 2. Composition and constituents of blood groups and Rh factor.
UNIT 4. A brief outline of organisation of endocrine system in mammals; anatomy of thyroid gland.

UNIT 5. Functions of hormones of thyroid gland.

PAPER ZooGP – 402 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
2. Blood group determination.
3. Counting of WBC/RBC (haemocytometer)
5. Study of histological slides of endocrine glands.

SEMESTER VI MAJOR
PAPER ZooMT – 601 (THEORY) PARASITOLOGY AND ETHOLOGY
MARKS:12(IA) + 48(END SEM) = 60
UNIT 1: Life history and mode of infection of and pathogenicity of Leishmania donovani.
UNIT 2: General organization and pathogenicity of bacteria and viruses (Rickettsia, Borrelia, Treponema and Leptospira); life history , parasitic adaptation and pathogenicity of Taenia solium.
UNIT 4: Sense organs and behaviour.
PAPER ZooMP – 602 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40
2. Study of protozoan parasites (permanent slides)
4. Study of habituation in mosquito larvae.
PAPER – ZooMT : 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY
MARKS : 12(IA) + 48(END SEM) = 60
UNIT 2 : Replication and transcription; genetic code; Wobble hypothesis; protein biosynthesis in prokaryotes.
UNIT 5 : Immunoglobulin : Basic structure, classes and functions; clonal selection theory; polyclonal and monoclonal antibodies.
PAPER – ZooMT : 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48(END SEM) = 60
UNIT 1: Introduction, history and scope, basic knowledge of genetic engineering, protoplast fusion and somatic hybridization technique; Basic principles of recombinant DNA technology, cutting, joining and visualization of DNA fragments, cloning vectors and gene cloning; application of DNA technology in agriculture and health.
PAPER – ZooMP : 605 (PRACTICAL) MARKS: 13(IA) + 52(END SEM) = 65
Project work = 15 Total =80
1.Determination of blood group and Rh factor.
2. Preparation and demonstration of ball and stick model of nucleotides.
5. Study of blood cell types in blood smear slides & PROJECT WORK OF VI SEM (M)

PAPER – ZooMT : 606 (THEORY) ECONOMIC ZOOLOGY
MARKS : 12(IA) + 48 (END SEM) = 60
UNIT 3: (Entire) Life history of honey bee (Apis indica); rearing techniques of honey bee; biology and culture of of lac insect.
PAPER – ZooMP : 607 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
7. Apiculture – culture of honeybee and extraction of honey.
8. Analysis of nutrients (carbohydrate, protein and lipid) of honey

SEMESTER VI GENERAL
PAPER – ZooGT : 601 (THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS
UNIT 5: (Entire) Sampling of data; graphic representation of data; histogram, bar diagram and oogive; Mean, maedian and mode; Mean deviation and standard deviation; Significance test(Students' t-test).

PAPER – ZooGP : 602 (PRACTICAL)
4. Simple biostatistical calculation involving mean, mode median and standard deviation.

RAJIB RUDRA TARIANG, ASSISTANT PROFESSOR

SEMESTER II MAJOR PAPER ZooMT: 201(THEORY) BIOCHEMISTRY
MARKS : 12(IA) + 48(END SEM) = 60

UNIT 4: Enzymes – nomenclature, IUB classification, Kinetics and mechanism of action; enzyme inhibition; coenzymes.

UNIT 5: DNA as genetic material, Genetic code, Transcription.

PAPER – ZooMP; 202 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Preparation of normal, molar and buffer solution.
2. Qualitative test for carbohydrates to identify common mono & disaccharides.
3. Essay of enzyme urease/peroxidase by titrimetric method.

SEMESTER II GENERAL

PAPER – ZooGP: 201(THEORY) CELL BIOLOGY AND BIOCHEMISRTY
MARKS:12(IA) + 48(END SEM) = 60

UNIT 1: Structure and function of Golgi bodies, Endoplasmic reticulum

UNIT 2: Structure and function of nucleus and chromosome.

UNIT 4: Nature and function of enzymes, vitamins – their sources and functions.

PAPER – ZooGP : 202 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

2. Preparation of slide for the study of mitosis and meiosis with suitable materials.
3. Preparation of normal and molar solution.
4. Qualitative test of carbohydrate.

SEMESTER IV MAJOR

PAPER – ZooMT : 401 (THEORY) CELL BIOLOGY , HISTOLOGY & HISTOCHEMISTRY
MARKS:12(IA) + 48(END SEM) = 60

UNIT 1: Structure and function of ER, Golgi bodies.

UNIT 5: Histological methods – basic principles of fixation, dehydration, embedding sectioning and spreading. Animal tissues- types and functions; histological structure of lung, liver.

PAPER – ZooMP : 402 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Study of mitosis in tadpole tail, onion root tip.
2. Meiosis in testes of grasshopper or cockroach
4. Histological preparation of liver, stomach, intestine, kidney, pancreas, testes and ovary of vertebrates and submission of slides.

PAPER – ZooMT : 403 (THEORY) DEVELOPMENTAL BIOLOGY
MARKS:12(IA) + 48(END SEM) = 60

UNIT 4: Organogenesis – development of sense organs – ears.

UNIT 5: Extra embryonic membranes in birds and placentation in mammals.

PAPER – ZooMP : 404 (PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40

1. Study of permanent slides of different embryonic stages of toad/frog.
3. Submission of permanent stained preparation of at least two stages upto 72 hrs. development stages of chick embryo.

SEMESTER IV GENERAL – PAPER : ZooGT : 401(THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY MARKS:12(IA) + 48(END SEM) = 60

UNIT 2: Physiology of respiration in mammals

UNIT 3: Drug addiction and its impact on society.

UNIT 4: Anatomy of pituitary and pancreas; neuroendocrine system in insects.

UNIT 5: Functions of hormones of pituitary and pancreas.

PAPER – ZooGP; 402(PRACTICAL) MARKS: 8(IA) + 32 (END SEM) = 40
1. Preparation of haemin crystals
2. Blood group determination
5. Study of histological slides of endocrine glands.

SEMESTER VI
PAPER – ZooMT: 601(THEORY) PARASITOLOGY AND ETHOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: Life history, mode of infection and pathogenicity of Giardia intestinalis.
UNIT 2: Life history, parasitic adaptation and pathogenicity of Wuchereria bancrofti.
UNIT 3:(**Entire**) Vectors of human diseases- Malaria, Yellow fever, Dengue, haemorrhagic fever, filariasis, Japanese B-encephalitis and dengue; measures of control of the vectors.
UNIT 5: Social behaviour in insects.
PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
3. Study of geotactic, phototactic, behaviour of earthworm, cockroach, Paramecium and fish.
4. Study of habituation in mosquito larvae.
PAPER ZooMT; 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: (Entire) Genome organization in prokaryotes and eukaryotes, DNA as genetic material, structure and functions of DNA & RNA; Watson & Crick Model of DNA; Other forms of DNA(A & Z).
UNIT 5: AIDS
PAPER – ZooMT: 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: Industrial biotechnology with special reference to production of alcohol and antibiotics.
UNIT 3: (Entire) Regulation of biotechnology: production and application of transgenic animals and plants. Genetically modified organism, their benefits and risk assessment; IPR, patents and ethical issues related to biotechnology .
PAPER – ZooMP : 605 (PRACTICAL) MARKS : 13(IA) + 52(END SEM) = 65
3. Detection / estimation of RNA PROJECT WORK = 15
5. Histological study of lymphoid organs TOTAL=80
PROJECT WORK – VI SEM Major students.
PAPER- ZooMT : 606 (THEORY) ECONOMIC ZOOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: (Entire) Major insect pests of paddy, tea and stored grains and their biology; Pest management – chemical and biological; integrated pest management.
UNIT 5: Piggery management and practices of pig rearing.
PAPER – ZooMP: 607(PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
2.Submission of life cycles of eri/muga/mulberry silkworms.
3. Study of important pests of paddy, tea plants and stored grains and their submission.
6. Demonstration of induced breeding in fish.
SEMESTER VI GENERAL
PAPER – ZooGT : 601 (THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 2: (Entire) Food chain and energy flow, food web.
UNIT 4: (Entire) Basic concept of wildlife and Protected Areas of Assam, endangered fauna of NE India and their conservation.
PAPER – ZooGP: 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
2. To find out the biotic components of a grassland/pond ecosystem and make probable food chain and food web.

KISHOR HALOI, ASSISTANT PROFESSOR

SEMESTER II MAJOR MARKS: 12(IA) + 48 (END SEM) = 60
PAPER – ZooMT: 201 (THEORY) BIOCHEMISTRY MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 2. Structure and function of carbohydrates, proteins, amino acids; levels of organizations of proteins.
UNIT 5. Structure and functions of DNA and RNA; DNA replication.

PAPER – ZooMP: 202 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) = 40
1. Preparation of normal, molar and buffer solution.
2. Qualitative test for carbohydrates to identify common mono & disaccharides.
3. Essay of enzyme urease/peroxidase by titrimetric method.

SEMESTER II GENERAL
PAPER- ZooGT: 201(THEORY) CELL BIOLOGY AND BIOCHEMISTRY
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: Structure and function of plasma membrane, membrane transport- osmosis, diffusion and active transport.
UNIT 3: Cell cycle; basic concept of cancer.
UNIT 4: Types of carbohydrates, proteins.

PAPER – ZooGP: 202 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) = 40
1.Study of mitosis and meiosis with the help of permanent slides.
2.Preparation of slide for study of mitosis and meiosis with suitable materials.
3. Preparation of normal and molar solution.
4. Qualitative test of carbohydrate.

SEMESTER IV MAJOR
PAPER – ZooMT : 401 (THEORY) CELL BIOLOGY, HISTOLOGY AND HISTOCHEMISTRY
MARKS: 12(IA) + 48(END SEM) = 60
UNIT 1. Overview of prokaryotic and eukaryotic cells; structure and function of plasma membrane (lipid bilayer model); extra cellular matrix; receptor mediated endocytosis.
UNIT 2. Structure and functions of chromosome; polytene & lampbrush chromosomes; Chromatin – molecular organization, nucleosome; models of chromosomal movements.
UNIT 5. Types of staining; vital staining, classification and properties of dyes; metachromatic dyes and staining; animal tissues – histological structure of stomach and intestine.
PAPER- ZooMP:402 (PRACTICAL) MARKS: 8(IA) + 32(END SEM)= 40
1. Study of mitosis in tadpole tail.
2. Meiosis in testes of grasshopper or cockroach.
4. Histological preparation of liver, stomach, intestine, kidney, pancreas, testes and ovary of vertebrates and submission of slides.
PAPER-ZooMT: 403 (THEORY) DEVELOPMENTAL BIOLOGY
MARKS: 12(IA) + 48(END SEM) = 60
UNIT 3: Cleavage and gastrulation – cleavage pattern , blastulation and gastrulation in chick; primary organisers, induction, property and mechanism of action of inductive substances.
UNIT 5: Organogenesis – development of eyes.
PAPER- ZooMP: 404 (PRACTICAL) MARKS: 8(IA) + 32(END SEM)= 40

2.Study of permanent slides of developmental stages in chick embryo.
3. Submission of permanent stained preparation of (at least two stages upto 72 hrs. development stages) chick embryo.

SEMESTER IV GENERAL

PAPER- ZooGT: 401 (THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY
MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: Physiology of excretion in mammals.
UNIT 3: Neurons and conduction of nerve impulse.
UNIT 5: General characters of hormones, feedback mechanism

PAPER-ZooGP: 402 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) =40

1. Preparation of haemin crystal.
1. Counting of WBC/RBC (haemocytometer)
5. Study of histological slides of endocrine glands.

SEMESTER VI

PAPER – ZooMT: 601 (THEORY) PARASITOLOGY AND ETHOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 1: Life history, mode of infection and pathogenicity of Trichomonas vaginalis & Plasmodium spp.
UNIT 2: Life history, parasitic adaptation and pathogenicity of Ancylostoma duodenale.
UNIT 4: Introduction to animal behaviour; brief history of ethology; patterns of behaviour; genetical and ecological aspect of behaviour.

PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1. Identification of mosquito species causing malaria, encephalitis, and dengue fever.
3. Study of chemotactic and sociotactic behaviour of earthworm, cockroach, Paramecium and fish.

PAPER ZooMT; 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 3: (Entire) Recombination in prokaryotes; transformation, conjugation and transduction;concept of transposons and plasmids; regulation of gene expression in prokaryotes, operon concept(Lac operon).
UNIT 5: Major histocompatibility complex- structure and function; immune system in health and disease.

PAPER- ZooMT: 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48 (END SEM) = 60

UNIT 2: DNA sequencing, human genome project.
UNIT 4: Nucleic acid and protein sequence database (NCBI, gene bank and SWISS-PROT) Data mining and data mining tools (ENTREZ).

PAPER-ZooMP:605 (PRACTICAL) MARKS: 13(IA) + 52(END SEM) = 65
3.Detection/ estimation of RNA PROJECT WORK =15 TOTAL=80
7.Different e-resources and database search
8.Similarity search in sequence such as BLAST / FASTA & Project work of VI (M) students.

PAPER- ZooMT: 606 (THEORY) **ECONOMIC ZOOLOGY**
MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: (Entire) Life histories of silk worm (eri, muga and mulberry); culture technique of silk worms; diseases of silk worms and its prevention.
UNIT 5: Poultry: selection of breed (chicken and duck) and their scientific rearing methods; poultry diseases and its prevention/control.

PAPER- ZooMP: 607 (PRACTICAL) MARKS: 8(IA) + 32(END SEM) = 40

1. Identification of silkworms (eri, muga and mulberry)
7. Apiculture- culture of honey bee and extraction of honey.
8. Analysis of nutrients (carbohydrate, protein and lipid) of honey.

SEMESTER VI GENERAL

PAPER-ZooGT: 601(THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS
MARKS:12(IA) + 48(END SEM) = 60

UNIT 3: (Entire) Environmental pollution and types, sources, cause, control and prevention of air and water pollution; biogeochemical cycles (carbon & nitrogen), green house effect, ozone depletion and its impact.

PAPER-ZooGP: **602 (PRACTICAL**) MARKS: 8(IA) + 32(END SEM) =40

1. To find out the abundance and density of soil fauna by quadrate method.

APARAJITA GOGOI, ASSOCIATE PROFESSOR

SEMESTER II MAJOR (THEORY)

PAPER- ZooMT : 201 (THEORY) BIOCHEMISTRY MARKS: 12(IA) + 48 (END SEM) =60

UNIT 3: General concept of metabolism – Glycolysis, Kreb's cycle, Electron transport system, and ATP synthesis; Beta oxidation of fatty acids.

UNIT 4: Vitamins (sources and functions)

PAPER- ZooMP :202 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

4. Estimation of ascorbic acid in lemon / milk.
5.Separation of amino acids using paper chromatography.

SEMESTER II GENERAL (THEORY)

PAPER- ZooGT: 201 (THEORY) CELL BIOLOGY AND BIOCHEMISTRY
MARKS: 12(IA) + 48(END SEM)= 60

UNIT 1: General structure and function of prokaryotic and eukaryotic cells;

UNIT 2: Structure and function of mitochondria

UNIt 5: Electron transport system , synthesis of ATP.

PAPER-ZooGP: 202 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

4. Qualitative tests of proteins and fats.
5. Qualitative test of salivary amylase

SEMESTER IV MAJOR

PAPER- ZooMT (THEORY) 401: CELL BIOLOGY, HISTOLOGY & HISTOCHEMISTRY
MARKS: 12(IA) + 48(END SEM)= 60

UNIT 1: Structure and function of mitochondria, nucleus

UNIT 2: DNA packaging in eukaryotes and prokaryotes.

UNIT 4: (Entire) Basic concept of cell signalling (endocrine, paracrine and autocrine signalling); Second messengers; function of cell surface receptors- G protein coupled receptors and G-proteins.

UNIT 5: Histological structure of bone. kidney.

PAPER- ZooMP: 402 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40

1.Study of mitosis in onion root tip.
3. Histochemical localization of - a) general lipid by Sudan black B method b)metachromatic substances by Toluidene blue method.

4. Histological preparation of liver, stomach, intestine, kidney, pancreas testes and ovary of vertebrates and submission of slides.

PAPER –ZooMT : 403 (THEORY) - DEVELOPMENTAL BIOLOGY
MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: Fertilization- types and mechanism of fertilization; mono and polyspermy; parthenogenesis.
UNIT 3: Fate maps, fate of germ layers.
PAPER- ZooMP: 404 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
2.Study of permanent slides of developmental stages in chick embryo.
3.Submission of permanent stained preparation of (at least two stages up to 72 hrs. developmental stages) chick embryo.

SEMESTER IV GENERAL
PAPER- ZooGT : 401 (THEORY) ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY
MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1: Digestion and absorption of proteins and fats.
UNIT 2: Blood coagulation
UNIT 4: Anatomy of adrenal gland of mammals
UNIT 5: Functions of adrenal gland.

PAPER- ZooGP : 402(PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
4. Display of pituitary and gonads of fishes.
5. Study of histological slides of endocrine glands.

SEMESTER VI MAJOR
PAPER – ZooMT : 601 (THEORY) PARASITOLOGY AND ETHOLOGY
MARKS: 12(IA) + 48(END SEM) = 60

UNIT 1: Parasitism; types of parasites, hosts and vectors; parasitic adaptations and effects on hosts; life history and mode of infection and pathogenicity of E.histolytica, Trypanosoma spp.
UNIT 2: Life history and parasitic adaptation and pathogenicity of Fasciola hepatica.
UNIT 5: Different types of orientation and communication in animals, comparative aspect of learning, offensive and defensive behaviour.
PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
1.Identification of mosquito species causing malaria, encephalitis and dengue fever.
2. Study of protozoan parasites (permanent slides).

PAPER – ZooMT: 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY
MARKS: 12(IA) + 48(END SEM) = 60

UNIT 4: (Entire) Types of immunity; cells and organs involved in immunity; lymphoid organs; antigens, properties of antigens, adjuvants and haptens; antigen- antibody reaction; vaccines and vaccinations.
UNIT 5: Basic concept of immunodiagnostic techniques (immuno-diffusion, RIA and ELISA).

PAPER- ZooMT : 604 (THEORY) BIOTECHNOLOGY AND BIOINFORMATICS
MARKS: 12(IA) + 48(END SEM) = 60

UNIT 2: Introduction to Omics; basic concept of structural and functional genomics, introduction to proteomics and transcriptomics.
UNIT 4: Fundamentals of bioinformatics: introduction history and scope of bioinformatics; sources of information, internet – world wide web and web browsers; Biological database: introduction, basic concepts of primary and secondary databases.
PAPER- ZooMP: 605 (PRACTICAL) MARKS: 13(IA) + 52 (END SEM)=65 + Project work= 15

Total = 80

2. Preparation and demonstration of ball and stick model of nucleotides.
6. Study of blood cell types in blood smear slides.
8. Similarity search in sequence such as BLAST / FASTA
Project work of VI Sem (M) students.

PAPER- ZooMT: 606 (THEORY) ECONOMIC ZOOLOGY; MARKS: 12(IA) + 48(END SEM)=60

UNIT 4: (Entire)Principles and practices of aquaculture; fish and prawn culture; preparation and management of different types of ponds for fish culture; induced breeding and hybridization technique in fishes; fish preservation methods; fish by-products.
PAPER- ZooMP: 607(PRACTICAL) MARKS: 8(IA) + 32(END SEM)=40
4. Identification of economically important fish and prawn available locally.
5. Identification of common aquatic weeds, plankton and insects.
SEMESTER VI GENERAL
PAPER- ZooGT: 601 (THEORY) ANIMAL ECOLOGY AND BIOSTATISTICS
MARKS: 12(IA) + 48(END SEM) = 60
UNIT 1:(Entire) Basic concept of ecosystem; brief account of abiotic and biotic factors in grassland and aquatic ecosystem; population structure.

PAPER-ZooGP: 602 (PRACTICAL) MARKS:8(IA) + 32(END SEM) =40
3.Study of man-made ecosystems (biotic and abiotic components)
4. Simple biostatistical calculations involving mean, median, mode and standard deviation

SEMESTER VI
PAPER – ZooMT: 601(THEORY) PARASITOLOGY AND ETHOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 1: Life history, mode of infection and pathogenicity of Trichomonas vaginalis & Plasmodium spp.
UNIT 2: Life history, parasitic adaptation and pathogenicity of Ancylostoma duodenale.
UNIT 4: Introduction to animal behaviour; brief history of ethology; patterns of behaviour; genetical and ecological aspect o behaviour.
PAPER – ZooMP : 602 (PRACTICAL) MARKS : 8(IA) + 32(END SEM) = 40
1. Identification of mosquito species causing malaria, encephalitis, and dengue fever.
3. Study of geotactic, phototactic, chemotactic and sociotactic behaviour of earthworm, cockroach, Paramecium and fish.

PAPER ZooMT; 603 (THEORY) MOLECULAR BIOLOGY AND IMMUNOLOGY
MARKS: 12(IA) + 48 (END SEM) = 60
UNIT 3: (Entire) Recombination in prokaryotes; transformation, conjugation and transduction;concept of transposons and plasmids; regulation of gene expression in prokaryotes, operon concept(Lac operon)

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DEPARTMENT OF ASSAMESE

SYLLAUS DISTREBUTION, 2019-2020(ODD SEMESTER)

1st ,3rd and 5th semester(from July,2019 to Dec,2019)

1st semester

Paper code	Course title	unit	Name of the Teacher
C1	History of Assamese Literature (From the Begening to Post Sankardeva Period)	01	Dr. Mrinal kr. Gogoi
		02	Deepa Sarma Borthakur
		03	Purnananda Saikia
		04	Achyut Saikia
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
C2	History of Assamese Literature (From the Arunodoi to Post war Period)	01	Achyut Saikia
		02	Simanta Bordoloi
		03	Purnananda Saikia
		04	Deepa Sarma Borthakur
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
AECC	Communicative Assamese	01	Purnananda Saikia
		02	Dr. Mrinal kr. Gogoi

3rd semester

Paper code	Course title	unit	Name of the Teacher
Major III ASMM 301	Introduction to Linguistics	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Deepa Sarma Borthakur

Paper code	Course title	unit	Name of the Teacher
Major IV ASMM 302	Selection from Assamese Poetry	01	Achyut Saikia
		02	Achyut Saikia
		03	Purnananda Saikia
		04	Purnananda Saikia
		05	Purnananda Saikia

Paper code	Course title	unit	Name of the Teacher
MIL I COMMERCE ASMC	Modern Indian Language (Assamese	01	Purnananda Saikia
		02	Deepa Sarma Borthakur & Simanta Bordoloi

301		03	Achyut Saikia
		04	Dr. Mrinal kr. Gogoi & Simanta Bordoloi

5th Semester.

Paper code	Course title	unit	Name of the Teacher
Major VII ASMM 501	Literary Theory and Creticism	01	Dr. Mrinal kr. Gogoi
		02	Dr. Mrinal kr. Gogoi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
Major VIII ASMM 502	Assamese Drama	01	Simanta Bordoloi
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Deepa Sarma Borthakur
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
Major IX ASMM 503	Cultural Studies	01	Purnananda Saikia
		02	Purnananda Saikia
		03	Purnananda Saikia
		04	Purnananda Saikia
		05	Purnananda Saikia

Paper code	Course title	unit	Name of the Teacher
Major X ASMM 504	Comparative Indian Literature	01	Achyut Saikia
		02	Achyut Saikia
		03	Achyut Saikia
		04	Achyut Saikia
		05	Achyut Saikia

DEPARTMENT OF ASSAMESE

Syllbus DISTREBUTION 2019-2020(Even SEMESTER)

2nd ,4th and 6th semester(from Jan,2020 to June,2020)

2nd , semester

Paper code	Course title	unit	Name of the Teacher
C3		01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Dr.Lakshmi Devi
		04	Dr.Lakshmi Devi
		05	Deepa Sarma Borthakur & Dr. Lakshmi Devi

Paper code	Course title	unit	Name of the Teacher
C4	Poetics	01	Achyut Saikia
		02	Achyut Saikia & Simanta Bordoloi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

4th semester

Paper code	Course title	unit	Name of the Teacher
Major V ASMM 401	Assamese Prose Literature	01	Achyut Saikia
		02	Dr. Lakshmi Devi
		03	Simanta Bordoloi
		04	Simanta Bordoloi
		05	Achyut Saikia

Paper code	Course title	unit	Name of the Teacher
Major VI ASMM 402	Language and Script of Assam	01	Deepa Sarma Borthakur
		02	Dr. Mrinal kr. Gogoi
		03	Deepa Sarma Borthakur
		04	Deepa Sarma Borthakur
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
MIL III NON-MAJOR ASM 401	Selection from Assamese Literature	01	Dr. Lakshmi Devi
		02	Deepa Sarma Borthakur
		03	Simanta Bordoloi
		04	Achyut Saikia
		05	Dr. Mrinal kr. Gogoi

6th semester

Paper code	Course title	unit	Name of the Teacher
Major XI ASMM 601	Various aspects of Studying Language and Literature	01	Dr. Lakshmi Devi
		02	Simanta Bordoloi
		03	Simanta Bordoloi
		04	Dr. Lakshmi Devi
		05	Achyut Saikia

Paper code	Course title	unit	Name of the Teacher
Major XII ASMM 602	Indo-Aryan Languages and Assamese Language	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Simanta Bordoloi
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
Major XIII ASMM 603	Linguistic Study of Assamese Language	01	Dr. Mrinal kr. Gogoi
		02	Dr. Mrinal kr. Gogoi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
Major XIV ASMM 604	Introduction to World Literature	01	Achyut Saikia
		02	Dr. Lakshmi Devi
		03	Achyut Saikia
		04	Achyut Saikia
		05	Dr. Lakshmi Devi

DEPARTMENT OF BENGALI

Course Distribution
Digboi College, Digboi.
Session: 2019-2020

Faculty Name	semester	Paper to Teach
Mr Dipesh Mandal	1st SEM(MIL)	UNIT- 1&3
	1st SEM (GE-1)	UNIT- 2&4
	2nd SEM	UNIT-2&4
	3rd SEM	UNIT-1,3&5
	4th SEM	UNIT- 1&3
Dr. Kanai Das	1ST SEM(MIL)	UNIT- 2&4
	1st SEM(GE-1)	UNIT- 1&3
	2nd SEM	UNIT- 1&3
	3rd SEM	UNIT- 2&4
	4th SEM	UNIT- 2&4

(Dipesh Mandal)

Signature of HoD

Department of Bengali.

DEPARTMENT OF CHEMISTRY

Course distribution

Session: June 2019-Dec 2019

Semester I (CBCS)	Semester III (Non CBCS)	Semester V (Non CBCS)
Paper C-101 (Inorganic Chemistry)	**Paper MM-301 (Inorganic Chemistry)**	**Paper MM-501 (Physical Chemistry)**
Unit 1: NH	Unit 1: NH	Unit I: NJK
Unit 2: NH	Unit 2: NH	Unit II: NJK
Unit 3: NH	Unit 3: NH	Unit III: NJK
Unit 4: NH		Unit IV: JD
		Unit V: JD
Paper C-102 (Physical Chemistry)	**Paper MM-303 (Organic Chemistry)**	**Paper MM-503 (Inorganic Chemistry)**
Unit I: NJK	Unit I:BS	Unit I: NH
Unit II: NJK	Unit II:BS	Unit II: NH
Unit III: JD	Unit III:BS	Unit III: NH
Unit IV: JD	Unit IV:BS	Unit IV: NH
	Unit V: BS	
Paper: Chemistry GE-101		
(Inorganic Chemistry+	**Paper NM -301**	**Paper MM-505 (Organic Chemistry)**
Organic Chemistry)	**(Organic Chemistry)**	
		Unit I: BS
Unit 1: NH	Unit I: BS	Unit II: BS
Unit 2: NH	Unit II: BS	Unit III: BS
Unit 3: BS	Unit III: NJK	Unit IV: BS
Unit 4: BS	Unit IV: NJK	Unit V: BS
Unit 5: BS	Unit V: BS	
		Paper MM-507(Symmetry and Quantum
		Chemistry)
		Unit I: NH
		Unit II: JD
		Unit III: JD
		Paper: NM 501
		(Inorganic Chemistry + Physical Chemistry)
		Unit I: NH
		Unit II: NH
		Unit III: NH
		Second half
		Unit I: JD
		Unit II: JD
		Unit III: JD
		Unit IV: NJK
		Unit IV: NJK
		Unit VI: NJK

JD: Mrs Jonali Dutta, NH: Mrs. Neelakshi Hazarika, NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia,

DEPARTMENT OF CHEMISTRY

Course distribution

Session: Jan 2020-May 2020

Semester II (CBCS)	Semester IV (Non CBCS)	Semester VI (Non CBCS)
Paper C-201 (Organic Chemistry)	**Paper MM-401 (Physical Chemistry)**	**Paper MM-601 (Physical Chemistry)**
Unit I: BS	Unit 1: JD	Unit I: JD
Unit II: BS	Unit 2: NJK	Unit II: JD
Unit III: AM	Unit 3: JD+NJK	Unit III: NJK
Unit IV: AM		Unit IV: NJK
Unit V:BS+AM		Unit V: JD
Paper C-202 (Physical Chemistry)	**Paper MM-403 (Organic Chemistry)**	**Paper MM-603 (Inorganic Chemistry)**
Unit I: NJK	Unit I: BS	Unit I: NH
Unit II: NJK	Unit II: BS	Unit II: NH
Unit III: JD	Unit III: AM	Unit III: NH
Unit IV: JD	Unit IV: AM	Unit IV: NH
	Unit V: AM	
Paper: Chemistry GE-201(Physical		**Paper MM-605 (Organic Chemistry)**
Chemistry+ Organic Chemistry)		
		Unit I: BS
Unit 1: JD	**Paper: NM- 401**	Unit II: BS
Unit 2: NJK	**(Physical Chemistry)**	Unit III: BS
Unit 3: NJK		Unit IV: AM
Unit 4: BS	Unit 1: NJK	Unit V: AM
Unit 5: BS	Unit 2: AM	Unit VI: AM
Unit 6: AM	Unit 3: NJK	
	Unit 4: JD	**Paper MM-607(Molecular Spectroscopy)**
	Unit 5: JD	
		Unit I: NH +JD
		Unit II: JD
		Unit III: NH +JD
		Unit IV: JD
		Unit IV: NH
		Paper: NM 601
		(Organic Chemistry)
		Unit I: BS
		Unit II: BS
		Unit III:BS
		Unit IV: AM
		Unit V: AM
		Unit VI: AM

JD: Mrs Jonali Dutta, NH: Mrs. Neelakshi Hazarika, NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia, AM: Dr Abhijit Mahanta

DEPARTMENT OF COMMERCE

Subject-wise Syllabus Distribution for the Academic session June-Dec 2019

Stream/ Subjects / Name Of The Faculty	SUBJECTS																Remarks
	HS 1ST YEAR		HS 2ND YEAR		B.COM 1 SEM		B.COM 3RD SEM					B.COM 5TH SEM					
	ACCY	BST	ACCY	BST	FA	BL	ITLP	MPA	HRM	BSTAT	ECOM	MA	ENTREP	DTAX	SM	RM	
PRADIP CH. DAS	Unit-IV,V,VII,VIII		A/B/Unit-I,V,VI		Unit-IV		Unit-I,II,V							Unit-I,II,III,IV			
DR. DEBORSHEE GOGOI		Unit III, VI, VII, VIII,XI, XII		Unit I, II, III, IX, X, XI		Unit IV, V		Unit I, V	Unit II, IV, V							Unit I, II, III, IV	
SAMPREETI BORUAH	Unit-VI,IX,X		B/Unit-I,II,III,IV		Unit-I, III		Unit-III,IV			Unit-II, IV		Unit-I,II,III	Unit-III,IV				
MURCHANA GOGOI	Unit-I,II,III		A/Unit-II,III,IV, V		Unit-II, V					Unit-I, V	Unit-II (half), III, V	Unit-IV	Unit-I,II				
SAMRAT BHARADWAJ		Unit I,II, IV,V, IX, X		Unit IV, V, VI, VII, VIII, XII		Unit I,II,III		Unit II, III, IV	Unit I, III	Unit-VI, III	Unit I, II(half), I V				Unit I, II, III, IV		

DEPARTMENT OF COMMERCE

Subject-wise Syllabus Distribution for the Academic session Jan-June 2020

Stream/ Subjects / Name Of The Faculty	SUBJECTS																		
	HS 1ST YEAR		HS 2ND YEAR		B.COM 2nd SEM		B.COM 4th SEM					B.COM 6th SEM							
	ACCY	BST	ACCY	BST	CA	CL	CA	AUD	SMKT	SAPM	CB	FSA	DT-II	RM	AM	SBM	IM	BAPP
PRADIP CH. DAS	Unit-IV,V,VII, VIII		A/B/Unit-I,V,VI		Unit-IV		Unit-I,II,V			Unit-V		Unit-III		Unit-I,II,III,IV				
DR. DEBORSHEE GOGOI		Unit III, VI, VII, VIII, XI, XII		Unit I, II, III, IX, X, XI		Unit IV, V		Unit I, V	Unit II, IV, V		Unit II, IV, V					Unit I, II	I,II	I
SAMPREETI BORUAH	Unit-VI,IX,X		B/Unit-I,II,III,IV		Unit-I, III		Unit-III,IV			Unit-II, IV		Unit-I,II	Unit-III,IV					II
MURCHANA GOGOI	Unit-I,II,III		A/Unit-II,III,IV, V		Unit-II, V					Unit-I, III		Unit-IV	Unit-I,II			III		III
SAMRAT BHARADWAJ		Unit I,II, IV,V, IX, X		Unit IV, V, VI, VII, VIII, XII		Unit I,II,III		Unit II, III, IV	Unit I, III		Unit I, III				I, II, III, IV	IV	III, IV	IV

DEPARTMENT OF EDUCATION

COURSE DISTRIBUTION for -2019-20

Course –Honors' / Generic –
Class/Semester-I
Name of the paper-philosophical foundation of Education
Marks Assigned- 16 per unit

UNIT	**Name of the Teacher**	Remarks
UNIT-I,V	**POBAN GOGOI**	
UNIT –II,IV	**PRADIP DUTTA**	
UNIT-III,	**SNEHA GOGOI**	

Name of the Teacher- Pradip Dutta
Course –Honors' / Generic –
Class/Semester-I
Name of the paper-sociological foundation of Education
Marks Assigned- 16

UNIT	**Name of the Teacher**	Remarks
UNIT-I,	**POBAN GOGOI**	
UNIT –II,IV	**PRADIP DUTTA**	
UNIT-III, V	**SNEHA GOGOI**	

Course –Honors'
Class/Semester-II
Name of the paper-psychological foundation of education
Marks Assigned- 16 per unit

UNIT	**Name of the Teacher**	Remarks
UNIT-I,IV	**POBAN GOGOI**	
UNIT –III	**PRADIP DUTTA**	
UNIT-II,IV	**SNEHA GOGOI**	

Course –Honors'
Class/Semester-II
Name of the paper-EDUCATIONAL MANAGEMENT AND ADMINSTRATION
Marks Assigned- 16 per unit

UNIT	**Name of the Teacher**	Remarks
UNIT- III ,IV	**POBAN GOGOI**	
UNIT –II,V	**PRADIP DUTTA**	
UNIT-II,IV	**SNEHA GOGOI**	

Course –HONOURS
Class/Semester-III
Name of the paper-Measurement and evaluation in education
Marks Assigned- 16

UNIT	**Name of the Teacher**	Remarks
UNIT- III ,V	**POBAN GOGOI**	
UNIT –I,IV	**PRADIP DUTTA**	
UNIT-II	**SNEHA GOGOI**	

Class/Semester-IV
UNIT ASSIGNED-ALL
Marks Assigned- 16 PER UNIT

NAME OF THE PAPER	**Name of the Teacher**	Remarks
EDUCATION IN PRE INDEPENDENT INDIA	**POBAN GOGOI**	
EDUCATIONAL TECHNOLOGY	**PRADIP DUTTA**	
METHOD AND TECHNIGUES OF TEACHING	**SNEHA GOGOI**	

DEPARTMENT OF ELECTRONICS
DIGBOI COLLEGE
Digboi - 786171
Tinsukia (Assam), India
E-mail- electronics.digboicollege@gmail.com
website: www.digboicollege.edu.in

Course Distribution
Session: Odd Semester 2019-20

Faculty Name	Semester	Paper to Teach
Dr. Jayanta Handique	1st	101M (All Unit) , 101G (unit- 2, 6)
	3rd	301G (Unit- 1,4)
	5th	501M (All Unit), 501G (Unit-4), RMEG501(Unit-1, 2, 4)
Mr. Satish Gupta	1st	101G(Unit-3,5)
	3rd	302M (Unit- All), 301G (Unit- 5, 6)
	5th	503M(Unit- All), 501G (Unit-3, 5), RMEG501(Unit-3,5)
Mr. Pradeep K. Khound	1st	101G (unit- 1,4)
	3rd	301M (Unit- All), 301G (Unit- 2, 3)
	5th	502M(Unit- All), 501G (Unit-1, 2)

Course Distribution
Session: Even Semester 2019-20

Faculty Name	Semester	Paper to Teach
Dr. Jayanta Handique	2nd	201G (unit- 2)
	4th	401M (Unit- All), 401G (Unit-3)
	6th	603M (All Unit), 601G (Unit-1,2), RMEG601(Unit-3, 4)
Mr. Satish Gupta	2nd	201G(Unit-4)
	4th	402M (Unit- All), 401G (Unit- 4, 6)
	6th	602M(Unit- All), 601G (Unit-3, 4), RMEG601(Unit-1,2)
Mr. Pradeep K. Khound	2nd	201M (Unit- All), 201G (Unit-1,3)
	4th	401G (Unit- 1, 2, 5)
	6th	601M(Unit- All)

DIGBOI COLLEGE: DEPT. OF ENGLISH
Distribution of Syllabus (June-Dec, 2019)

Semester I: English Honours

Core 1			Core 2		
Unit	**Topic**	**Teacher**	**Unit**	**Topic**	**Teacher**
I	Kalidasa: Abhijnana Shakuntalam *Temptation of Karna	PB	I	Homer: The Iliad	CC
II	Vyasa: Dicing, Sequel to Dicing *Temptation of Karna	SD	II	Sophocles: Antigone	GB
III	Sudraka: Mrcchakatika	JD	III	Plautus: Pot of Gold	BRP
IV	Shankaradeva: Parijata Harana	SD	IV	Ovid: Bacchus, Pyramus and Thisbe,	CC
				Ovid: Philomela Horace: Satiresl:4	BRP
				Persius: Satires	GB

3RD SEM MAJOR

301			302		
Unit	**Topic**	**Teacher**	**Unit**	**Topic**	**Teacher**
I	Language	SD	I	Shakespeare, Donne, Herbert	CC
II	Critical Terms	PB	II	Paradise Lost	GB
III	Classical Mythology	BRP	III	Wordsworth, Keats	BRP
			IV	Browning, Arnold	JD
			V	Yeats, Eliot	PB

5TH SEMESTER MAJOR

501			502		
Unit	**Topic**	**Teacher**	**Unit**	**Topic**	**Teacher**
I	Background of Drama	BRP/SD/CC	I	: Poetics	GB
II	King Lear	BRP	II	Sublime	PB
III	Pygmalion	CC	III	Apology for Poetry	SD
IV	Waiting for Godot	SD	IV	Preface to Shakespeare	BRP

503			504		
Unit	**Topic**	**Teacher**	**Unit**	**Topic**	**Teacher**
I	Machiavelli	GB	I	History of Indian English writing	PB/JD/CC
II	Locke	GB	II	Kanthapura	CC
III	Rousseau	PB	III	From Heaven Lake	JD
IV	Marx	JD	IV	Poetry	PB

DIGBOI COLLEGE: DEPT. OF ENGLISH
Distribution of Syllabus (June-Dec, 2019)

Semester I: General English

Unit		Arts Gr-A	Arts Gr-B	Science	Commerce
Unit I:	Communication: Theory and Types	PB	CC	SD	GB
Unit II:	Speaking Skills	GB	BRP	JD	GB
Unit III:	Reading and Understanding	PB	CC	SD	GB
Unit IV:	Writing Skills	GB	BRP	JD	GB

Semester I: Alt. English

Unit	Topic	Arts	Science	Commerce	Remarks
Unit I:	Prose	JD/BRP	SD/CC	GB/PB	To be negotiated mutually
Unit II:	Short stories	BRP/JD	CC/SD	PB/GB	

BA 3rd Semester: General English

Unit	Topic	Teacher
Unit I:	Wordsworth: We are Seven R. Frost: Mending Wall T.S.Eliot: To the Indians…. N.Ezekiel: A Very Indian poem in Indian English	SD
Unit II:	L. Hughes: Ballad of the Landlord S. Heaney: The Wife's Tale Grace Nichols: Wherever I Hang D, Walcot: Koening of the River	PB
Unit III:	Chekhov: A Marriage Proposal	BRP

BA 3rd Semester: CMSK

Unit	Topic	Teacher
Unit I:	Essay Writing	CC
Unit II:	Conversational English	JD
Unit III:	Common Mistakes in English	JD
Unit IV:	Grammar in Communication	CC

DEPARTMENT OF MATHEMATICS

COURSE DISTRIBUTION

(SESSION 2019-2020, w.e.f. 10-06-2019)

DEPARTMENT OF MATHEMATICS, DIGBOI COLLEGE, DIGBOI

Mr. K. N. Timsina	HS I(Sc)/HS I(Com): Binomial Theorem, Sequence and Series, Probability HS II(Sc)/HS II (Com): Inverse Trigonometric Functions, Matrices, Determinants SEM I : GE – UNIT I SEM V(M) : MM504 – (A) MECHANICS SEM V(P) : NM501 – (A) MECHANICS
Dr. J. Changmai	HS I(Sc)/HS I(Com): Sets, Relations and Functions, Introduction to 3D Geometry, Mathematical Reasoning HS II(Sc)/HS II (Com) : Relations and Functions, Probability SEM I(M) : C2 – UNIT I & II SEM III(M) : MM302 – (A) 2D & 3D SEM III(P) : NM301 – (A) 2D & 3D SEM V(M) : MM501 – (A) LOGIC AND COMBINATORICS (B) COMPLEX ANALYSIS
Dr. J. Lahkar	HS I(Sc)/HS I(Com): Trigonometric Functions, Straight Lines, Conic Sections HS II(Sc)/HS II (Com) : Vectors, 3D Geometry, Linear Programming SEM I(M) : C1 – UNIT I, III, IV & PRACTICAL SEM III(M) : MM301 – (A) UNIT IV & (B) UNIT II SEM V(M) : MM503 – FLUID MECHANICS
Mr. M. Buragohain	HS I(Sc)/HS I(Com) : Complex Numbers and Quadratic Equations, Limits and Derivatives HS II(Sc)/HS II (Com) : Continuity and Differentiability, Applications of Derivatives, Differential Equations SEM I(M) : C2 – UNIT IV SEM I(P) : GE – UNIT II SEM III(M) : MM301 – (A) UNIT I, II, III SEM III(P) : NM301 – (B) UNIT I, II, III SEM V(M) :MM502 – (A) LINEAR ALGEBRA, (B) NUMBER THEORY
Dr. J. Konch	HS I(Sc)/HS I(Com) :Principle of Mathematical Induction, Linear Inequalities, Permutations and Combinations, Statistics MB HS II(Sc)/HS II (Com) : Integrals, Applications of the Integrals – JL SEM I(M) : C1 – UNIT II – JLB : C2 – UNIT III KT SEM I(P) : GE – UNIT III – MB SEM III(M) : MM301 – (B) UNIT I & (C) RIEMANN INTREGRAL – JL SEM III(P) : NM301 – (B) UNIT IV SEM V(M) : MM504 – (B) INTEGRAL TRANSFORMATION

Remarks: 1. WEEKLY TARGET -> 9% OF THE ALLOTED COURSE TO BE COMPLETED.

2. Details of remedial classes shall be announced later on.

JLahkar 10/6/2019

Head
Department of Mathematics
Digboi College, Digboi

Course Distribution:: Dept. of Mathematics, Digboi College, Session January-May, 2019-20:: Even Sem & HS1, wef 17.01.2020

Class	Subject	Teacher	Marks	Class	Units	Teacher	Marks
HS I Math SC	Unit-I: Set, Relations & Functions	JC	18	HS 1 Math Com	Unit-I: Set, Relations & Functions	JC	18
	Unit-V:Mathematical reasoning	JC	3		Unit-V:Mathematical reasoning	JC	3
	Unit-II:Binomial Theorem	MB	10		Unit-II:Binomial Theorem	MB	10
	Unit-IV:Calculus	MB	6		Unit-IV:Calculus	MB	6
	Unit-VI:Statitics	MB	6		Unit-VI:Statitics	MB	6
	Unit-I:Trigonometry	JL	11		Unit-I:Trigonometry	JL	11
	Unit-III: Coordinate geometry	JL	13		Unit-III: Coordinate geometry	JL	13
	inequalities, Permutation Combination	BD	20		Inductuion,Linear Inequalities,	BD	20
	Sequences & Series	BD	7		Equation, Sequences & Series	BD	7
	Unit-VI:Probability	BD	6		Unit-VI:Probability	BD	6
SEM II (H)	**COURSE CODE:C3(Real Analysis)**			SEM II (C)	**COURSE CODE:GE2(Diff. Equation)**		
	(A) UNIT-1	BD	30		(A) UNIT-1	MB	16
	(B) UNIT-2	JC	30		(B) UNIT-2	MB	20
	(C) UNIT-3	KT	20		(C) UNIT-3	MB	16
	COURSE CODE:C4(Diff. Equation)				(D) UNIT-4	BD	16
	(A) UNIT-1	JL	15		(E) UNIT-5	BD	12
	(B) UNIT-2	JL	10				
	(C) UNIT-3	MB	25				
	(D) UNIT-4	MB	10				
	(E) PRACTICAL	JL/MB	20				
SEM IV (M)	**COURSE CODE:-MM401**			SEM IV(P)	**COURSE CODE:-NM401**		
	(A)C-PROGRAMMING	JL	50		(A) Linear Prog . Problem	JL	50
	(B) COMPUTER LAB	JL	30		(B) COMPUTER LAB	JL	30
	(C-Programming, Matlab)				(Matlab, Mathematica)		
	COURSE CODE:-MM402						
	(A) Linear Prog. Problem	JL	45				
	(B) Analysis -II(Multiple Integral)	KT	35				
SEM VI(M)	**Paper-MM601**			SEM VI(P)	**Paper-NM601**		
	(A)Metric Space	KT	40		(A) Discrete mathematics	JC	45
	(B)Statistics	JC	40		(B)Metric Space	KT	35
	Paper-MM602						
	(A) Discrete mathematics	JC	45				
	(B) Graph Theory	MB	35				
	Paper-MM603						
	(A) Algebra II	MB	40				
	(B) Partial Differential Equation	BD	40				
	Paper-MM604(GR.B)						
	(A) Space Dynamics	KT	40				
	(B) Relativity	JL	40				

1. PROF. K.N. TIMSINA(KT)
2. DR. J. CHANGMAI(JC)
3. DR. J. LAHKAR(JL)
4. PROF. M. BURAGOHAIN(MB)
5. SRI BISWAJIT DAS (BD)

Dr. J. Lahkar
HoD, Maths

DEPARTMENT OF PHILOSOPHY

COURSE DISTRIBUTION

SESSION: 2019—20 (I)

Dr. I. DAS: III SEM. (NM), 301(INDIAN PHILOSOPHY-II), FULL PAPER
V SEM. (M), 502 (WESTERN LOGIC), FULL PAPER
V SEM. (NM), 501 (INDIAN & WESTERN LOGIC), FULL PAPER
H.S-I, UNIT: I, II & III
H.S-II, UNIT: I, II & IV

Mr. B. NARZARY: I SEM. (H), C1 (INDIAN PHILOSOPHY), FULL PAPER
III SEM. (M), 302 (WESTERN PHILOSOPHY), FULL PAPER
V SEM. (M), 504 (PHILOSOPHY OF RELIGION), FULL PAPER
H.S-I, UNIT: VI, VII &VIII
H.S-II, UNIT: IV, VII & VIII

Dr. R. SARMAH: I SEM. (H), C2 (LOGIC), FULL PAPER
III SEM. (M), 301 (INDIAN PHILOSOPHY-II), FULL PAPER
V SEM. (M), 501 (INDIAN LOGIC), FULL PAPER
H.S-I, UNIT: IV, V & VI
H.S-II, UNIT: III, IV & V

DEPARTMENT OF PHILOSOPHY

COURSE DISTRIBUTION

SESSION: 2019—20 (II)

Dr. I. DAS: VI SEM. (M), 603 (SOCIAL AND POLITICAL PHILOSOPHY), FULL PAPER
VI SEM. (M), 604 (PSYCHOLOGY), FULL PAPER
VI SEM. (NM), 601 (SOCIAL AND POLITICAL PHILOSOPHY), FULL PAPER
H.S-I, UNIT: I, II & III
H.S-II, UNIT: I, II & IV

Mr. B. NARZARY: II SEM. (H), C3 (ANCIENT GREEK PHILOSOPHY), FULL PAPER
IV SEM. (M), 402 (WESTERN ETHICS), FULL PAPER
VI SEM. (M), 602 (CONTEMPORARY WESTERN PHILOSOPHY), FULL PAPER
H.S-I, UNIT: VI, VII &VIII
H.S-II, UNIT: IV, VII & VIII

Dr. R. SARMAH: II SEM. (H), C4 (INDIAN LOGIC), FULL PAPER
IV SEM. (M), 401 (INDIAN ETHICS), FULL PAPER
VI SEM. (M), 601 (CONTEMPORARY INDIAN PHILOSOPHY), FULL PAPER
H.S-I, UNIT: IV, V & VI
H.S-II, UNIT: III, IV & V

Department of Physics, Digboi College

Course Distribution

From July to December 2019

(Odd Semester)

B. SC. 1st SEMESTER (HONS) (CBCS)

Paper Code	Title	Name of Faculty
C - I	Mathematical Physics-I (Theory)	Dr Rashmi Patowary Parvind Kr Sahu
C - I	Mathematical Physics-I (Lab)	Dr Rashmi Patowary Parvind Kr Sahu
C - II	Mechanics (Theory)	Dr K Konwar
C - II	Mechanics (Lab)	Dr K Konwar

B. SC. 1st SEMESTER (GENERIC) (CBCS)

Paper Code	Title	Name of Faculty
GE - I	Mechanics (Theory)	Dr K Konwar
GE - I	Mechanics (Lab)	Dr K Konwar

B. SC. 3rd SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 301	Optics	Dr R Patowary
PHYM - 302	Electricity & Magnetism	Dr K Konwar Dr P Basyach
PHYM - 303	Laboratory	Dr K Konwar

B. SC. 3rd SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 301	Electricity, Magnetism and Electromagnetic Theory	Dr K Konwar Dr P Basyach

B. SC. 5th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 501	Mathematical Physics II	Dr R Patowary
PHYM - 502	Electrodynamics & Special Relativity	Dr P Basyach Dr R Patowary
PHYM - 503	Atomic & Molecular Physics	Dr Sumi Bhuyan
PHYM - 504	Electronics	Dr. K Konwar
PHYM - 505	Laboratory	Dr. K Konwar

B. SC. 5th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 501	Atomic and Nuclear Physics	Dr R Patowary Dr. Sumi Bhuyan

M. SC. 1st SEMESTER (CBCS) (1st Batch)

Paper Code	Title	Name of Faculty
C - I	Mathematical Physics	Dr Rashmi Patowary
C - II	Quantum Mechanics	Dr S Bhuyan
C - III	General Lab-I	Dr K Konwar
DSE - I B	Atmospheric Physics	Dr K Konwar
AEC - I C	Nano Structured Materials	Parvind Kr Sahu

M. SC. 3rd SEMESTER (NCBCS) (3rd Batch)

Paper Code	Title	Name of Faculty
PH-30100	Atomic and Molecular Physics	Dr K Konwar
PH-30200	Computational Physics	Dr R Patowary
PH-30300	Nano Structured Material	Parvind Kr Sahu
PH-30400	Vacuum Techniques	Dr P Basyach
PH-30530	Digital Electronics	Dr K Konwar
PH-30540	Condensed Matter Physics: Electronic Properties of Solids	Dr S Bhuyan
PH-30610	Laboratory Condensed Matter Physics-I	Dr S Bhuyan
PH-30610	Laboratory Electronics-I:	Dr K Konwar

Department of Physics, Digboi College
Course Distribution
From January to June 2020
(Even Semester)

B. SC. 2nd SEMESTER (HONS) (CBCS)

Paper Code	Title	Name of Faculty
C - III	Electricity and Magnetism (Theory)	Dr K Konwar Dr Deep Kr Kuri
C - III	Electricity and Magnetism (Lab)	Dr K Konwar Dr Deep Kr Kuri
C - IV	Waves and Optics (Theory)	Dr Rashmi Patowary Dr Sumi Bhuyan
C - IV	Waves and Optics (Lab)	Dr Rashmi Patowary Dr Sumi Bhuyan

B. SC. 2nd SEMESTER (GENERIC) (CBCS)

Paper Code	Title	Name of Faculty
GE - 2	Electricity And Magnetism (Theory)	Dr K Konwar Dr Deep Kr Kuri
GE - 2	Electricity And Magnetism (Lab)	Dr K Konwar Dr Deep Kr Kuri

B. SC. 4th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 401	Mathematical Physics I	Dr Rashmi Patowary Dr P Basyach
PHYM - 402	Quantum Mechanics	Dr Deep Kr Kuri Dr K Konwar
PHYM - 403	Laboratory	Dr K Konwar

B. SC. 4th SEMESTER (GENERAL (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 401	Quantum Mechanics & Mathematical Physics	Dr K Konwar Parvind Kr Sahu
PHYG - 402	Practical-II	Dr K Konwar

B. SC. 4th SEMESTER (GENERIC) (CBCS)

Paper Code	Title	Name of Faculty
GE - 4	Waves and Optics (Theory)	Dr Sumi Bhuyan
GE - 4	Waves and Optics (Lab)	Dr Sumi Bhuyan

B. SC. 6th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 601	Statistical Mechanics	Dr Deep Kr Kuri
PHYM - 602	Condensed Matter Physics	Dr Sumi Bhuyan
PHYM - 603	Nuclear Physics	Dr Rashmi Patowary
PHYM - 604	Laser and its Application	Dr. Kanchan Konwar
PHYM - 605	Laboratory	Dr. Kanchan Konwar

B. SC. 6th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 601	Electronics & Solid state Physics	Dr. Kanchan Konwar Dr. Sumi Bhuyan
PHYG - 602	Practical -III	Dr. Kanchan Konwar Dr. Sumi Bhuyan

M. SC. 2nd SEMESTER (CBCS) (2nd Batch)

Paper Code	Title	Name of Faculty
C - IV	Classical Mechanics	Dr Deep Kr Kuri
C - V	Condensed Matter Physics	Dr Sumi Bhuyan Dr Dibyajyoti Kakoti
C - VI	General Lab-II	Dr. Kanchan Konwar
DSE - II A	Plasma Physics	Dr Rashmi Patowary
GE - I (GE-205)	Material Chemistry	Dr Abhijit Mahanta (Full Paper)

M. SC. 4th SEMESTER (NCBCS) (3rd Batch)

Paper Code	Title	Name of Faculty
PH-40100	Statistical Mechanics	Dr Deep Kr Kuri
PH-40200	Plasma Physics	Dr. R Patowary
PH-40300	Meteorology	Dr. R Patowary
PH-40400	Observational Astronomy	Parvind Kr Sahu
PH-40530	Communication Electronics	Dr K Konwar
PH-40540	Condensed Matter Physics: Lattice Vibrations and Semiconductor Physics	Dr. Sumi Bhuyan Parvind Kr Sahu
PH-40610	Laboratory Condensed Matter Physics-II	Dr. Sumi Bhuyan Parvind Kr Sahu
PH-40610	Laboratory Electronics-II	Dr K Konwar

DEPARTMENT OF ZOOLOGY

COURSE DISTRIBUTION OF SEM I HONOURS- ZOOLOGY (CBCS) -2019 JUNE

MRS. APARAJITA GOGOI, ASSOCIATE PROFESSOR (H.O.D.)

CORE COURSE I – NON-CHORDATES I: PROTISTS AND PSEUDOCOELOMATES (THEORY) - CREDITS 4

COURSE CODE: ZC 101 T

UNIT 1: PROTISTA, PROTOZOA AND METAZOA

General characteristics and classification up to classes, Structural organization and nutrition of Euglena

UNIT 3: CNIDARIA

General characteristics and classification up to classes, Metagenesis in Obelia

UNIT 6: NEMATHELMINTHES

Life cycle and pathogenicity of Wuchereria bancrofti, Parasitic adaptations in helminthes

PRACTICAL: COURSE CODE: 101 P CREDIT 1 (TOTAL CREDIT 2)

1. Study of Sycon (T.S. and L.S.), Hyalonema , Euplactella, Spongilla
2. Identification of museum specimens
3. Study of adult Fasciola hepatica, Taenia solium and their life cycle (slides/microphotographs)
4. Submission of Project Report on any related topic based on theory syllabus

CORE COURSE II – PRINCIPLES OF ECOLOGY (THEORY) -- CREDIT 1 (TOTAL CREDIT 4)

COURSE CODE : ZC 102 T

UNIT 1: INTRODUCTION TO ECOLOGY

History of synecology

UNIT 2: POPULATION

Unitary and modular populations – unique and group attributes of population: Density, natality, mortality , life tables, fecundity tables, survivorship curves , age ratio, sex ratio, dispersal and dispersion

UNIT 3: COMMUNITY

Community characteristics: species richness, dominance, diversity, abundance, vertical Stratification

UNIT 4: ECOSYSTEMS

Ecological pyramids and ecological efficiencies, nutrient and biogeochemical cycle with Nitrogen

Cycle as an example

PRACTICAL : COURSE CODE : ZC 102 P CREDIT 1 (TOTAL CREDITS 2)

1 Study of Life tables and plotting of survivorship curves of different types from hypothetical and

real data.

2. Determination of Dissolved Oxygen and free Co2 of an aquatic system
3. Visit to National parks/Biodiversity Park/ Wild life sanctuary/Reserved forest

GENERIC I ANIMAL DIVERSITY - CREDIT 1 (TOTAL CREDIT 4)

UNIT 1: PROTISTA

General characters of Protozoa; Life cycle of Plasmodium

UNIT 5: PSEUDOCOELOMATES

General characters of nemathelminthes; Parasitic adaptations

UNIT 9: COELOMATE DEUTEROSTOMES

General characters of Echinodermata, Water Vascular system in Starfish

UNIT 12: AMPHIBIA

Parental care in Amphibia

GENERIC PRACTICAL: CREDIT 1 (TOTAL CREDITS 2)

1. Study of specimens – Non chordates and Chordates
2. Study of permanent slides Cross section of Sycon, Sea anemone and Ascaris male and female
3. Temporary mounts of Placoid, cycloid and ctenoid scale
4. Dissection – Urinogenital system of Rat

SEMESTER III MAJOR (NON-CBCS)

ZooMT – 301: CHORDATE DIVERSITY AND COMPARATIVE ANATOMY

MARKS:12(IA)+48=60

UNIT-3:Distinctive characters and classification of Amphibia upto orders with example; parental care, metamorphosis and neoteny in Amphibia.

UNIT- 4:Mammalia

Unit-5: Comparative account of circulatory system in reptiles, birds and mammals.

ZooMP-302 PRACTICAL 8(IA)+32=40

Dissection – 9^{th} and 10^{th} cranial nerves of Scoliodon

1.Identification of vertebrate specimens.

2.Preparation of permanent slides (five minimum slides of vertebrate exoskeleton –scale, feather etc)

3.Study of pectoral and pelvic girdles of bird.

ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS MARKS: 12(IA)+48=60

UNIT-1:(Entire) Chromatography

UNIT-5: Scope and utility of statistics in Bioscience --- to --- representation of data.

ZooMP – 304 MARKS : 8(IA)+32=40

1.Demonstration of instruments prescribed in the syllabus.

SEMESTER III GENERAL

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY

MARKS:12(IA)+48=60

UNIT-1: Fishes – classification upto orders, respiratory organs and migration.

UNIT-2: Amphibia- classification upto orders, parental care.

UNIT-5: Patterns of cleavage ---- to ---- cell linage.

ZooGP-302 PRACTICAL MARKS: 8(IA)+32=40

1.Dissection – Afferent branchial system of Scoliodon.

2.Identification as per syllabus. 3. Preparation of permanent slides. 4. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION MARKS:12(IA)+48=60

UNIT-1:(Entire)- Mendel's Law of Inheritance.....

UNIT-5: Continental drift --- to --- adaptive radiation

ZooMP-502 MARKS **:** 8(IA)+32=40

1.Simple calculation based on Mendel's mono /dihybrid cross.

ZooMT- 503 ANIMAL PHYSIOLOGY MARKS: 12(IA)+48=60

UNIT-1: Entire – Muscle and its contraction.....

ZooMP – 504 MARKS:8(IA)+32=40

1.Recording of heart beat of frog by kymograph.

2.Qualitative test of salivary amylase.

ZooMT – 505 ENVIRONMENTAL BIOLOGY AND WILD LIFE MARKS:12(IA)+48=60

UNIT-4: Environmental pollution – (water)—and bioindicators of pollution studies --- to – greenhouse effect

UNIT- 5: Threats to biodiversity --- to --- ex-situ & in-situ conservation strategies.

ZooMP – 506 PRACTICAL MARKS:8(IA)+32=40

4. Find out abundance and densities of terrestrial invertebrates / macrophytes associated fauna by quadrate method.

6. Field study

7. Project work (to be evaluated in VI semester) should be discussed and distributed among the faculty members.

ZooMT – 507 ENDOCRINOLOGY MARKS:12(IA)+48=60

UNIT-1: Comparative anatomy of thyroid in fish, amphibian, bird and mammal.

UNIT -2: Hormones secreted by thyroid gland & their function in mammals.

UNIT-4: (Entire) – Roles of hormones in reproductive cycle, pregnancy, parturition and lactation; methods of contraception; amniocentesis and IVF.

ZooMP – 508 MARKS: 8(IA)+32=40

1. Histological preparation of gonads.
2. Dissection & display of thyroid gland of fish/ bird.
3. Submission of chart / model of endocrinology.

SEMESTER V GENERAL

ZooGT- 501 GENETICS AND MOLECULAR BIOLOGY MARKS: 12(IA)+48=60

UNIT -1:(Entire) - Principles of heredity; Mendel's laws; linkage and crossing over; non-chromosomal inheritance; sex determination in animals.

ZooGP – 502 MARKS : 8(IA)+32=40

1.Mendelian problems on monohybrid and dihybrid cross.

MR. RAJIB RUDRA TARIANG, ASSISTANT PROFESSOR

CORE COURSE I: NON-CHORDATES I : PROTISTS TO PSEUDOCOELOMATES (THEORY) CREDITS – 4

COURSE CODE : ZC 101 T

UNIT 1: PROTISTA, PARAZOA and METAZOA

Structural organization and nutrition of Amoeba and Paramoecium

UNIT 2: PORIFERA

General characteristics and classification upto classes , Canal system and spicules in sponges

UNIT 3: CNIDARIA

Polymorphism in Cnidaria, Corals and coral reefs

UNIT 6: NEMATHELMINTHES

General characteristics and classification upto classes, Life cycle and pathogenicity of Ascaris Lumbricoides

PRACTCAL : COURSE CODE 101 P CREDIT 1 (TOTAL CREDITS 2)

Study of whole mount of Euglena, Amoeba and Paramoecium, Binary fission and conjugation in Paramoecium

Identification of museum specimens, Study of adult Fasciola hepatica, Taenia solium and their life cycles (slides/microphotographs)

Submission of Project Report on any related topic based on theory syllabus

CORE COURSE II – PRINCIPLES OF ECOLOGY - CREDIT 1 (TOTAL CREDIT 4)

COURSE CODE: ZC 102 T

UNIT 1: INTRODUCTION TO ECOLOGY

Levels of organization, Laws of limiting factors, Study of abiotic factors

UNIT 2: POPULATION

Exponential and logistic growth, equation and patterns, r and K strategies , population regulation- density-dependant and independent factors

UNIT 4: ECOSYSTEM

Human modified ecosystem

PRACTICAL: COURSE CODE ZC 102 P CREDIT 1 (TOTAL CREDITS 2)

1. Determination of population density in a natural/hypothetical community by quadrate method and calculation of Shannon-Weiner diversity index for the same community.
2. Study of an aquatic ecosystem : Phytoplankton and Zooplankton, Measurement of area, Temperature, turbidity/ penetration of light, determination of pH
3 . Visit to National parks/Biodiversity Park/ Wild life sanctuary/Reserved forest

GENERIC I : ANIMAL DIVERSITY - CREDIT 1 (TOTAL CREDITS 4)

UNIT 2: PORIFERA

General characters and canal system in Porifera

UNIT 6: Coelomate Protostomes

General characters of Annelida ; Metamerism

UNIT 10: PROTOCHORDATA

Salient features

UNIT 13: Amniotes; Origin of reptiles; Terrestrial adaptations in reptiles.

GENERIC : PRACTICAL CREDIT 1 (TOTAL CREDITS 2)

1. Study of specimens : Non-chordates, Chordates
2. Study of permanent slides – T.S. of Earthworm passing through pharynx, gizzard and typhlosolar intestine, Bipinnaria and Pluteus larva
3. Temporary mounts of septal nephridia of earthworm
4. Dissection – Digestive and Nervous system of cockroach

SEMESTER III MAJOR NON-CBCS

ZooMT – 301: CHORDATE DIVERSITY AND COMPARATIVE ANATOMY

MARKS:12IA + 48=60

UNIT- 2: (Entire)- Distinctive characters of Petromyzontia --- to --- parental care in fish.

UNIT - 3: Distinctive characters and classification of Reptilia upto order with example --- to ---- biting mechanisms of poisonous snakes.

Unit-5 : Comparative account of reproductive systems of reptiles, birds and mammals.

ZooMP- 302 MARKS : 8(IA)+32=40

1.DISSECTION – Internal ear of Scoliodon.

2.IDENTIFICATION

3.DEMONSTRATION of Digestive , Circulatory and Respiratory and Urinogenital systems of Reptiles, Birds & Mammals through electronic media.

ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS MARKS:12(IA)+48=60

UNIT -2: (Entire) Microscopy ----

UNIT-4: Principles and practices of centrifugation; autoradiography.

ZooMP-304 MARKS : 8(IA)+32=40

1.Demonstration of instruments as prescribed in the syllabus.

SEMESTER III GENERAL

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY 12(IA)+48=60

UNIT-2: Reptilia : Classification upto orders --- to --- Biting mechanism.

UNIT-3: Mammalia: Classification upto orders; dentition in mammals.

UNIT-5: Extra embryonic membranes; types and physiology of placenta.

ZooGP : 302 MARKS : 8(IA)+32=40

1.DISSECTION – Internal ear of Scoliodon

2.IDENTIFICATION – Vertebrate specimens

3.Study of Chick embryo upto 72 hrs of development by permanent slides.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION MARKS : 12(IA)+48=60

UNIT -4: Evidences of theories of evolution - - - to - - - Modern synthetic theory.

UNIT-5: Concept of population - - - to - - gene frequency (Genetic drift, gene flow, genetic load).

ZooMP- 502 MARKS : 8(IA)+32=40

1.Polytene chromosome of Chironomus or Drosophila larvae.

ZooMT- 503 ANIMAL PHYSIOLOGY MARKS : 12(IA)+48=60

UNIT- 5: (Entire) Nervous system – neurons --- -- to ---social implications.

ZooMP- 504 MARKS : 8(IA)+32=40

1.Determination of R.Q. of cockroach/goroi fish

2.Demonstration of knee-jerk reflex

3.Demonstration of osmosis using toad/frog urinary/ alimentary canal.

ZooMT- 505 ENVIRONMENTAL BIOLOGY & WILDLIFE MARKS: 12(IA)+32=40

UNIT-3: Biogeochemical cycles – carbon cycle; Basic concept of remote sensing and EIA.

UNIT -4: Ozone layer depletion and its impact.

UNIT-5: IUCN status of species category ----- to ----- Golden mahaseer ; Major National Parks of N.E.India - - - to - - Wildlife Protection Act, 1972.

ZooMP-506 MARKS: 8(IA)+32=40

1. Estimation of size of population by capture recapture method.

2. Study of structural components of an aquatic / grassland ecosystem.

3. Field study

4. Project Work (Project topics should be discussed and distributed among faculty members).

ZooMT-507: ENDOCRINOLOGY MARKS :12(IA)+48=60

UNIT-1: Comparative anatomy of Adrenal gland of fish, amphibian, bird and mammals.

UNIT-2: (Entire) Hormones secreted by adrenal gland & their function in mammal.

ZooMP-508 MARKS : 8(IA)+32=40

1.Histological preparation of adrenal gland .

2.Dissect and display adrenal/pituitary gland in fish/bird.

3. Study of permanent slides of endocrine glands.

SEMESTER V GENERAL

ZooGT- 501 : GENETICS AND MOLECULAR BIOLOGY MARKS:12(IA)+48=60

UNIT-3: (Entire) Nucleic acids .....

UNIT-5: Genetic engineering, Restriction enzymes.

ZooGP-502 MARKS : 8(IA)+32=40

1.Preparation of slides for study of mitosis and meiosis using suitable material.

DR. KISHOR HALOI, ASSISTANT PROFESSOR

CORE COURSE I: NON-CHORDATES I : PROTISTS TO PSEUDOCOELOMATES (THEORY) CREDITS – 4
COURSE CODE : ZC 101 T

UNIT 1: PROTISTA, PARAZOA AND METAZOA

Life cycle and pathogenicity of Plasmodium vivax. Evolution of symmetry and segmentation in Metazoa.

UNIT 4: CTENOPHORA

General characteristics and Evolutionary significance

UNIT 5: Life cycle and pathogenicity of Taenia solium

PRACTICAL: COURSE CODE ZC 102 P CREDIT 1 (TOTAL CREDITS 2)

1. Examination of pond water collected from different places for diversity in Animal
2. Protista (Protozoa)
3 .Identification of museum specimens
4. Study of Ascaris lumbricoides and its life stages (slides/microphotographs)
5. Submission of Project Report on any related topic based on theory syllabus

CORE COURSE II – PRINCIPLES OF ECOLOGY - CREDIT 1 (TOTAL CREDIT 4)
COURSE CODE : ZC 102 T

UNIT 2: POPULATION

Population interactions , Gause's Principle with laboratory and field examples, Lotka-Volterra equation for competition and predation, functional and numerical responses

UNIT 4: ECOSYSTEM

Types of ecosystems with one example in detail (Forest ecosystem), Food chain : Detritus and Grazing food chains, Linear and Y-shaped food chains, food web, Energy flow through the ecosystem.

PRACTICAL : COURSE CODE : ZC 102 P CREDIT 1 (TOTAL CREDITS 2)

1 Study of Life tables and plotting of survivorship curves of different types from hypothetical and real data.

2. Determination of Dissolved Oxygen and free Co2 of an aquatic system
3. Visit to National parks/Biodiversity Park/ Wild life sanctuary/Reserved forest

GENERIC I: ANIMAL DIVERSITY - CREDIT 1 (TOTAL CREDITS 4)

UNIT 3: RADIATA

General characters of Cnidarians and polymorphism

UNIT 7: ARTHROPODA

General characters, Social life in insects

UNIT 11: PISCES

Osmoregulation, Migration of Fishes

UNIT 14: AVES

The origin of birds; Flight adaptations

UNIT 15: Mammalia

Early evolution of mammals.

GENERIC PRACTICAL: CREDIT 1 (TOTAL CREDITS 2)

1. Study of specimens – Non chordates and Chordates
2. Study of permanent slides Cross section of Sycon, Sea anemone and Ascaris male and female
3. Temporary mounts of Placoid, cycloid and ctenoid scales
4. Dissection – Urinogenital system of Rat

SEMESTER III MAJOR NON-CBCS

ZooMT – 301: CHORDATE DIVERSITY AND COMPARATIVE ANATOMY

MARKS :12(IA)+48=60

UNIT-4: General characters & classification of Aves - - - to - - migration in birds.

UNIT-5: Comparative anatomy of integument of fish, reptile and mammals. Comparative anatomy of brain & cranial nerves in amphibia and mammals.

ZooMP - 302 MARKS : 8(IA)+32=40

1.Dissection –Efferent branchial system of Scoliodon, Weberian ossicles of carp /catfish

2.Identification of vertebrate specimens.

3.Preparation of permanent slides.

4. Study of vertebral columns of mammals; pectoral pelvic girdles of reptiles.

ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS MARKS: 12(IA)+48=60

UNIT-3: Photometry – principle and uses of colorimeter & spectrophotometer.

UNIT-5: Measures of statistical average ---- to --- Significance test (t, F and chi-square test).

ZooMP-304 MARKS : 8(IA)+32=40

1.Separation of chlorophyll by paper chromatography.

2.Demonstration of instruments as prescribed in the syllabus.

3. Statistical calculations – central tendency, deviations, correlation, regression & t test.

SEMESTER III GENERAL

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY

MARKS: 12(IA)+48=60

UNIT-3: Aves – classification up to super-orders - - - to - - - bird migration.

UNIT-4: Gametogenesis – spermatogenesis, types of animal eggs, vitellogenesis, egg membranes.

ZooGP : 302 MARKS : 8(IA)+32=40

1.Dissection- Efferent branchial system of Carp fish

2.Preparation of permanent slides of suitable vertebrate material.

3. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION MARKS : 12(IA)+48=60

UNIT-2: Linkage --- to --- gene mapping.

UNIT-3: (Entire) Concept of gene --- to ---- Human genome project.

ZooMP-502 MARKS : 8(IA)+32=40

1.Study of chromosomal slides of suitable material.

4.Study of materials / organisms of evolutionary significance (rocks, fossils and connecting links)

ZooMT-503 ANIMAL PHYSIOLOGY MARKS : 12(IA)+48=60

UNIT-4: (Entire) Circulation – coronary circulation ---- to ---- tracheal respiration in insects.

ZooMP-504 MARKS : 8(IA)+32=40

1.Determination of R. Q. Of cockroach/Goroi fish

2.Preparation of haemin crystal

3.R.B.C. and W.B.C. counting by haemocytometer.

ZooMT- 505 ENVIRONMENTAL BIOLOGY AND WILDLIFE 12(IA)+32=40

UNIT-1: (Entire) Concepts pertaining to ecosystem --- to --- energy flow.

UNIT-2: (Entire) Shelford's Law of tolerance ---- to--- predator –prey relationships.

UNIT -3: Nitrogen cycle.

ZooMT-506 MARKS:8(IA)+32=40

1.Find out the abundance and density of insect pests in some essential food commodities.

2. Field study

3. Project work (to be evaluated in semester VI , should be discussed and distributed among the faculty members).

ZooMP-507 ENDOCRINOLOGY MARKS :12(IA)+48=60

UNIT-1: Comparative anatomy of Pituitary in Fish, Amphibia, Bird and Mammals.

Unit -2: Hormones secreted by pituitary gland and their function in mammal.

UNIT-5: (Entire) Neuroendocrine system in insects; role of hormones in growth and development of insects.

ZooMP-508 PRACTICAL MARKS:8(IA)+32=40

1.Histological preparation of thyroid gland.

2.Dissect and display of Pituitary & adrenal gland of fish/bird

3.Study of permanent slides of endocrine glands.

SEMESTER V GENERAL

ZooGT- 501 GENETICS AND MOLECULAR BIOLOGY MARKS: 12(IA)+48=60

UNIT-2: (Entire) Concept of gene .....

UNIT-5: Basic steps in gene cloning; cloning vectors.

ZooGP-502 PRACTICAL MARKS : 8(IA)+32=40

1. Preparation of slides of mitosis and meiosis using suitable material
2. Construction of nucleotides using ball and stick model.

COURSE DISTRIBUTION OF SEM I HONOURS ZOOLOGY (CBCS)

CORE COURSE I: NON-CHORDATES I : PROTISTS TO PSEUDOCOELOMATES (THEORY) CREDITS – 4

FOURTH FACULTY, ASSISTANT PROFESSOR - CREDIT 1

COURSE CODE: 101 T

UNIT 1: PROTISTA, PARAZOA AND METAZOA

Locomotion and Reproduction in Animal Protista (Protozoa)

UNIT 5: PLATYHELMINTHES

General characteristics and classification upto classes; Life cycle and pathogenicity of Fasciola hepatica

PRACTICAL: COURSE CODE : 101 P CREDIT 1 (TOTAL CREDITS 2)

1. Examination of pond water collected from different places for diversity in Animal
2. Protista (Protozoa)
3. Identification of museum specimens
4. Study of Ascaris lumbricoides and its life stages (slides/microphotographs)
5. Submission of Project Report on any related topic based on theory syllabus

CORE COURSE II – PRINCIPLES OF ECOLOGY - CREDIT 1 (TOTAL CREDIT 4)

COURSE CODE: ZC 102 T

UNIT 3: COMMUNITY

Ecotone and edge effect; Ecological succession with hydrosere; Theories pertaining to climax Community

UNIT 5: APPLIED ECOLOGY

Concept of wildlife conservation (Usefulness, causes ands consequences of degradation); Management strategies.

PRACTICAL: COURSE CODE : ZC 102 P CREDIT 1 (TOTAL CREDITS 2)

1. Determination of population density in a natural/hypothetical community by quadrate method and calculation of Shannon-Weiner diversity index for the same community.
2. Study of an aquatic ecosystem : Phytoplankton and Zooplankton, Measurement of area, Temperature, turbidity/ penetration of light, determination of pH
3. Visit to National parks/Biodiversity Park/ Wild life sanctuary/Reserved forest

GENERIC I: ANIMAL DIVERSITY - CREDIT 1 (TOTAL CREDITS 4)

UNIT 4: ACOELOMATES

General characters of Helminthes: Life cycle of Taenia solium

UNIT 8: MOLLUSCA

General characters of Mollusca; Pearl formation

UNIT 12: AMPHIBIA

General characters, Adaptation to terrestrial life

UNIT 15: MAMMALIA

Primates: Dentition in mammals

GENERIC PRACTICAL: CREDIT 1 (TOTAL CREDITS 2)

1. Study of specimens : Non-chordates, Chordates
2. Study of permanent slides – T.S. of Earthworm passing through pharynx, gizzard and typhlosolar intestine, Bipinnaria and Pluteus larva
3. Temporary mounts of septal nephridia of earthworm
4. Dissection – Digestive and Nervous system of cockroach

SEMESTER III MAJOR (NON-CBCS)

ZooMT : 301 CHORDATE DIVERSITY AND COMPARATIVE ANATOMY

MARKS : 12(IA)+48=60

UNIT -1: (Entire) General characters of chordates and classification upto class, claasification of protochordata upto orders, general characters of hemichordate, urochordata and cephalochordate, larval forms and their significance in chordate phylogeny, affinities of protochordates.

UNIT -5: Comparative anatomy of pectoral and pelvic girdles of tetrapoda; comparative account of alimentary system in reptiles, birds and mammals.

ZooMP : 302 MARKS : 8(IA)+32=40

1.DISSECTION- Efferent branchial system of Scoliodon, IX & X cranial nerves of Scoliodon

2. IDENTIFICATION – Vertebrate specimens

3. PREPARATION OF PERMANENT SLIDES –Vertebrate exoskeletons – feather, scales etc.

4. STUDY OF BONES- Pectoral and Pelvic girdles of Amphibia.

ZooMT – 303 : BIOINSTRUMENTATION & BIOSTATISTICS 12(IA)+48=60

UNIT-4: Principles and uses of kymography, microtomy and ultramicrotomy.

ZooMP -304 MARKS : 8(IA)+32=40

1.Separation of chlorophyll by paper chromatography.

2.Demonstration of instruments as prescribed in the syllabus

SEMESTER III GENERAL :

ZooGT : 301 CHORDATE DIVERSITY & DEVELOPMENTAL BIOLOGY MARKS : 12(IA)+48=60

UNIT-1: General characters of chordates; Protochordates; classification up to orders, structural organization of Hemichordates, Urochordates.

UNIT-4: Fertilization – types and mechanism ; Parthenogenesis.

ZooGP – 302 MARKS : 8(IA)+32=40

1.DISSECTION – External morphology, Efferent branchial system of Scoliodon.

2.IDENTIFICATION – Vertebrate specimens.

3. Preparation of permanent slides

4. Study of chick embryo development upto 72 hrs by permanent slides.

SEMESTER V MAJOR

ZooMT-501 GENETICS AND EVOLUTION MARKS : 12(IA)+48=60

UNIT -2: Determination of sex, Sex linked inheritance, Cytoplasmic Inheritance.

UNIT -4: Origin of life (chemical & biological origin); variation – types and sources; isolation; speciation (sympatric, allopatric and peripatric); fossil and fossilization.

ZooMP – 502 MARKS : 8(IA)+32=40

1.Study of materials/ organisms of evolutionary significance (Rocks, Fossil and Connecting links).

ZooMT -503 ANIMAL PHYSIOLOGY MARKS : 12(IA)+48=60

UNIT -2: (Entire) Digestion – site and sequence of digestion; digestive secretions and their regulation; mechanism of digestion and absorption of carbohydrates, proteins and lipids; role of gastro-intestinal hormones; balanced diet.

UNIT -3: (Entire) Excretion – structure and function of nephron ; renal blood supply, mechanism and regulation of urine formation, renal failure and dialysis.

ZooMP – 504 MARKS : 8(IA)+32=40

1.Qualitative test of salivary amylase.

2. Recording of heart beat by kymograph

8. RBC and WBC counting by haemocytometer.

ZooMT- 505 ENVIRONMENTAL BIOLOGY AND WILDLIFE MARKS : 12(IA)+48=60

UNIT-3: Biogeochemical cycles – phosphorus & hydrological cycles. Renewable and non-renewable resources of NE India & strategy for their sustainable utilization.

Unit -4: Air & soil pollution

ZooMP – 506 MARKS : 8(IA)+32=40

1. Determination of dissolved oxygen / alkalinity in the water samples.

2. Field study

3. Project Work (Project topics should be discussed and distributed among faculty members)

ZooMT – 507 : ENDOCRINOLOGY MARKS : 12(IA)+48=60

UNIT -1: Comparative anatomy of pancreas in Fish, Amphibia, Birds and Mammals.

UNIT -2: Hormones secreted by pancreas and their function in mammals.

UNIT -3: (Entire) General characters of hormones, mechanism of action of hormones, regulation of hormone secretion, hypothalamo-hypophyseal system, disorders associated with hypo & hyper secretion of hormones.

ZooMP – 508 MARKS : 8(IA)+32=40

1. Histological preparation of thyroid gland.
2. Dissection of thyroid gland of fish/bird
3. Study of permanent slides of endocrine glands.
4. Submission of charts / models related to endocrinology

SEMESTER V GENERAL

ZooGT- 501 : GENETICS AND MOLECULAR BIOLOGY MARKS : 12(IA)+48=60

UNIT- 4: Concept of central dogma, genetic code, basic steps of transcription and translation .

ZooGP – 502 MARKS : 8(IA)+32=40

1. Preparation of nucleotides using ball and stick model.

2. Preparation of slides of meiosis using suitable materials

COURSE DISTRIBUTION FOR II (CBCS), IV (Non-CBCS) AND VI (Non-CBCS) SEMESTER JANUARY-MAY 2020]

RAJIB RUDRA TARIANG (Head)

Semester II (Honours) CBCS
CCIII – Non-chordates II: Coelomates
UNIT 3: Arthropoda- General characteristics and classification up to classes.Vision & Respiration in
Arthropoda, Metamorphosis in Insects, Social life in bees and termites.
CCIII-Practical- Non-Chordates II Coelomates
Unit 1: Study of specimens as per syllabus
Unit 4: Mount of mouth parts and dissection of digestive system and nervous system of *Periplaneta*.

CCIV – : Cell Biology
UNIT -2: Plasma Membrane- Various models in plasma membrane structure, Transport across membranes: Active and Passive transport. Facilitated transport, Cell junctions: Tight junctions, Desmosomes, Gap Junctions.
UNIT – 3: Structure & functions: Endoplasmic Reticulum.
CCIV-Practical: Cell Biology
Unit 1.Preparation of temporary stained of onion root tip to study various stages of mitosis.
Unit 2.Study of various stages of meiosis.

Semester II (Generic) CBCS
CCII-GE-VIIIINSECT VECTORS AND DISEASES
Theory:
Unit I: Introduction to Insects: General Features of Insects, Morphological features, Head – Eyes,
Types of antennae, Mouth parts w.r.t. feeding habits.
Unit III: Insects as Vectors: Classification of insects up to orders, detailed features of orders with
insects as vectors – Diptera, Siphonaptera, Siphunculata, Hemiptera.
Unit VI: Hempitera as Disease Vectors: Bugs as insect vectors; Blood-sucking bugs; Chagas disease,
Bed bugs as mechanical vectors, Control and prevention measures.
Practical:
Unit 1: Study of different kinds of mouth parts of insects.
Unit 2: Submission of a project report on any one of the insect vectors and disease transmitted.

Semester IV Major

Zoo MT- 401: Cell Biology, Histology &Histochemistry

UNIT 1: Structure and functions of plasma membrane (lipid bilayer model). Structure & function of ER,

Golgi Bodies.

UNIT 5: Histological structure of muscles, Animal tissues- types and functions lung, stomach, intestine

& liver.

ZooMP- 402: Practical based on ZooMT- 401

1. Study of Mitosis in tadpole & onion root tip.

Zoo MT- 403: Developmental Biology

Unit-4: Organogenesis – development of sense organs-Ears.

Unit -5: Extra embryonic membranes in birds and placentation in mammals.

ZooMP- 404: Practical based on ZooMT- 403

UNIT 1: Study of permanent slides of developmental stages in chick embryo

UNIT 3: Submission of permanent stained preparation of (at least two stages up to 72 hrs. development stages) chick embryo.

Zoo MT- 401: Animal physiology and Endocrinology

UNIT 1: Digestion and absorption of carbohydrate

UNIT 4: Anatomy of pituitary & pancreas gland; neuroendocrine system in insects

UNIT 5: Function of pituitary & pancreas gland.

ZooGP- 402: Practical based on ZooGT- 401

Unit 1: Preparation of haemin crystals

Unit 5: Study of histological slides of endocrine glands

Semester VI Major

Zoo MT- 601: Parasitology and Ethology

UNIT 1: Life history, mode of infection and pathogenicity of *Giardia intestinalis*.

UNIT 2: life history, parasitic adaptation and pathogenicity of *Wuchereriabancrofti*

UNIT 3: Vectors of human diseases- Yellow fever, dengue, haemorrhagic fever, filariasis, Japanese B-encephalitis &; measures of control of the vectors.

UNIT 4: Social behavior in insects.

ZooMP- 602: Practical based on ZooMT- 601

UNIT 1: Identification of mosquito species causing malaria, encephalitis and dengue fever

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ZooMT- 603: Molecular Biology and Immunology

Unit-1: Genome organization in prokaryotes and eukaryotes, DNA as genetic material, structure

and
functions of DNA & RNA; Watson & Crick Model of DNA; other forms of DNA (A & Z).

Unit -5: AIDs

ZooMT- 604: Biotechnology and Bioinformatics

UNIT-1: Industrial biotechnology with special reference to production of alcohol and antibiotics.

UNIT-3: Regulation of biotechnology: production and application of transgenic animals and plants,

Genetically modified Organism, their benefits and risk assessment; IPR, patents and ethical
issues related to biotechnology.

ZooMP- 605: Practical based on papers ZooMT- 603 and ZooMT- 604

UNIT-1: Determination of blood group and Rh factor

UNIT-4: Immunodiffusion / Blood groping (Ag-Ab reaction)

ZooMT- 606: Economic Zoology

Unit-1: Major insect pests of paddy, tea and stored grains and their biology; Pest management-chemical,
cultural and biological; integrated pest management.

ZooMP- 607: Practical based on ZooMT- 606

UNIT 2: Submission of life cycles of eri/ muga/ mulberry silkworms.

UNIT 3: Study of important pests of paddy, tea plants and stored grains and their submission

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DEPARTMENT OF ZOOLOGY
(COURSE DISTRIBUTION FOR II, IV AND VI SEMESTER JANUARY-MAY 2020)

APARAJITA GOGOI (Associate Professor)

Semester II (Honours) CBCS
CCIII – Non-chordates II: Coelomates

UNIT 5: Mollusca- Torsion and detorsion in Gastropoda.

UNIT 6: Echinodermata: General Characteristics and classification upto classes, water vascular system
inAsteroidea, Larval forms in Echinodermata, Affinities with Chordates.

CCIII-Practical- Non-Chordates II Coelomates

Unit 1: Study of specimens as per syllabus

Unit 2: Study of digestive system, septalnephridia and pharyngeal nephridia of earthworm.

CCIV –: Cell Biology

UNIT 6: Nucleus-Structure of nucleus: Nuclear envelope, nuclear pore complex, NucleousChromation:
Euchromatin and Heterochromatin and Packaging (Nucleosome).
UNIT 8: GPCR and Role of second messenger (cAMP).
CCIV-Practical- Cell Biology:
Unit 2: Study of various stages of meiosis.
Unit 3.Preparation of permanent slide to show the presence of Barr body in human female blood Cells/cheek cells.

Semester II (Generic) CBCS
CCII-GE-VIIIINSECT VECTORS AND DISEASES
Theory:
Unit II: Concept of Vectors: Brief introduction of Carrier and Vectors (mechanical and biological
vector), Reservoirs, Host-vector relationship, Vectorial capacity, Adaptations as vectors, Host
Specificity.
Unit IV: Siphonaptera as Disease Vectors: Fleas as important insect vectors; Host-specificity, Study of Flea-
borne diseases – Plague, Typhus fever; Control of fleas.
Practical:
Unit 2: Study of following insect vectors through permanent slides/ photographs: *Aedes, Culex, Anopheles,*
Pediculushumanuscapitis, Pediculushumanuscorporis, Phithirus pubis, Xenopsyllacheopis.
Unit 4:Submission of a project report on any one of the insect vectors and disease transmitted

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Semester IV Major

Zoo MT- 401: Cell Biology, Histology &Histochemistry
UNIT 1: Structure and functions of cell organelles- mitochondria & nucleus.
UNIT 2: DNA packaging in prokaryotes and eukaryotes.
UNIT-4: Basic concept of cell signalling (endocrine, paracrine and autocrinesignalling); second messengers; function of cell surface receptors- G protein-coupled receptors and G-proteins.
UNIT-5: Animal tissues- types and functions- Bone & Kidney.

ZooMP- 402: Practical based on ZooMT- 401
UNIT 3: Histochemical localization of following:
a. General lipid by Sudan black B method.
b. Metachromatic substances by Toluidine blue method.

Zoo MT- 403: Developmental Biology
UNIT 2 : Fertilization- types and mechanism of fertilization; mono and polyspermy; parthenogenesis.

UNIT 3: Fate maps; fate of germ layers.

ZooMP- 404: Practical based on ZooMT- 403

UNIT 1: Study of permanent slides of different embryonic stages of frog/toad

UNIT 3: Submission of permanent stained preparation of (at least two stages up to 72 hrs. development
stages) chick embryo.

Semester IV General

Zoo MT- 401: Animal physiology and Endocrinology

Unit –1: Digestion and absorption of proteins and fats.
Unit –2: Blood coagulation
Unit -3: Anatomy of Adrenal Gland
Unit -4 : Function of Adrenal Gland

ZooGP- 402: Practical based on ZooGT- 401

Unit 4: Display pituitary and gonad of fishes.
Unit 5: Study of histological slides of endocrine glands

Semester VI Major

Zoo MT- 601: Parasitology and Ethology

Unit-1: Parasitism; types of parasites, hosts and vectors; parasitic adaptations and effects on hosts; life history and mode of infection and pathogenicity of *Entamoebahistolytica.*
Unit- 2: Life history, parasitic adaptation and pathogenosity of *Fasciola hepatica.*
Unit-5: Different types of orientation and communication in animals; comparative aspects of learning, offensive and defensive behavior.

ZooMP- 602: Practical based on ZooMT- 601

UNIT 2: Study of protozoan parasites (permanent slides)

ZooMT- 603: Molecular Biology and Immunology

Unit-4: Types of immunity; cells and organs involved in immunity; lymphoid organs; antigens, properties of antigens, adjuvant and haptens; antigen-antibody reaction; vaccines and vaccinations.
Unit-5: basic concept of immunodiagnostic techniques (immunodiffusion, RIA and ELISA).

ZooMT- 604: Biotechnology and Bioinformatics

UNIT-2: Introduction of Omics: basic concept of structural and functional genomics. Introduction to
proteomics and transcriptomics.

UNIT 4: Fundamentals of bioinformatics: introduction, history and scope of bioinformatics; sources of
information, internet world wide web and web browsers; Biological database: introduction, basic concepts of primary and secondary databases.

ZooMP- 605: Practical based on papers ZooMT- 603 and ZooMT- 604

UNIT 2: Preparation and demonstration of ball and stick model of Nucleotides

UNIT 5: Study of Blood Cell types in blood smear slides.

UNIT 8: Similarity search in sequence such as BLAST / FASTA

ZooMT- 606: Economic Zoology

UNIT-4: Principles and practices in aquaculture; fish and prawn culture; preparation and management
of different types of ponds for fish culture; induced breeding and hybridization technique in fishes; fish preservation methods; fish by-products.

ZooMP- 607: Practical based on ZooMT- 606

UNIT 4: Identification of economically important fish and prawn available locally.

UNIT 5: Identification of common aquatic weeds, plankton and insects.

DEPARTMENT OF ZOOLOGY
(COURSE DISTRIBUTION FOR II, IV AND VI SEMESTER JANUARY-MAY 2020)

Dr. KISHOR HALOI (Asst. Professor)

Semester II (Honours) CBCS
CCIII – Non-chordates II: Coelomates

UNIT -1 Introduction to Coelomates- Evolution of coelom and metamerism.

UNIT- 2 General characteristics and classification up to classes, excretion in Annelida.

UNIT 4: Onychophora- General Characteristics and Evolutionary significance.

CCIII-Practical- Non-Chordates II Coelomates

Unit 1: Study of specimens as per syllabus

Unit 3.Study of T.S. through pharynx, gizzard and typhlosolar intestine of earthworm.

CCIV –: Cell Biology

Semester II (Generic) CBCS
CCII-GE- VIII INSECT VECTORS AND DISEASES
Theory:

Unit IV: Dipteran as Disease Vectors: Dipterans as important insect vectors – Mosquitoes, Sand fly, Houseflies; Study of mosquito-borne diseases – Malaria, Dengue, Chikungunya, Viral encephalitis, Control of mosquitoes.Study of sand

fly-borne diseases – Visceral Leishmaniasis, Cutaneous Leishmaniasis, Phlebotomus fever; Control of Sand fly.

Practical:

Unit 2: Study of following insect vectors through permanent slides/ photographs: *Cimexlectularius,*

Phlebotomusargentipes, Muscadomestica, through permanent slides/ photographs.

Unit 4: Submission of a project report on any one of the insect vectors and disease transmitted.

Semester IV Major

Zoo MT- 401: Cell Biology, Histology &Histochemistry

UNIT 1: Structure and functions of cell organelles- lysosome, ribosome; receptor mediated endocytosis.

UNIT 3: Cell cycle- molecular events in different phases, regulation of cell cycle; normal and malignant

cell growth; cell division (mitosis and meiosis); programmed cell death (apoptosis)

Unit–5: Histological methods- basic principles of fixation, dehydration, embedding, sectioning and

spreading; types of staining; vital staining; classification and properties of dyes; metachromatic dyes and staining.

ZooMP- 402: Practical based on ZooMT- 401

UNIT-4: Histological preparation of liver, stomach, intestine, kidney, pancreas, testes and ovary of vertebrates and submission of slides

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Zoo MT- 403: Developmental Biology

Unit-1: Gametogenesis- formation of gametes (spermatogenesis; oogenesis); structure, maturation and

growth of sperm and ovum; vitellogenesis.

Unit-4: Organogenesis – development of sense organs-Eyes.

ZooMP- 404: Practical based on ZooMT- 403

UNIT 1: Study of permanent slides of developmental stages in chick embryo

UNIT 3: Submission of permanent stained preparation of (at least two stages up to 72 hrs. development stages) chick embryo.

Semester IV General

Zoo MT- 401: Animal physiology and Endocrinology

Unit –1: Balanced diet.

Unit –2: Physiology of respiration and excretion in mammals.

Unit –4: A brief outline of the organization of endocrine system in mammals.

ZooGP- 402: Practical based on ZooGT- 401

Unit—3 : Counting of WBC/RBC (haemocytometer)

Unit 5: Study of histological slides of endocrine glands

Semester VI Major

Zoo MT- 601: Parasitology and Ethology

UNIT 1: Life history and mode of infection and pathogenicity of *Trypanosoma*spp., *Leishmania Donovanii*

UNIT 2: General organizations and pathogenosity of bacteria & viruses (*Rickettsia, Borrelia, Treponema*&*Leptospira*)

UNIT 3: Introduction to animal behaviour; brief history of ethology; patterns of behavior.

ZooMP- 602: Practical based on ZooMT- 601

UNIT 3: Study of geotactic, phototactic, chemotactic and sociotacticbehaviour of earthworm, cockroach, *Paramecium* and fish.

ZooMT- 603: Molecular Biology and Immunology

UNIT 2: Replication and transcriptions; genetic code; Wobble hypothesis; protein biosynthesis in prokaryotes.

UNIT-3: Recombination in prokaryotes; transformation, conjugation and transduction.

UNIT-5: Immunoglobulin: basic structure, classes and functions**.**

ZooMT- 604: Biotechnology and Bioinformatics

UNIT-1:Basic principles of recombinant DNA technology, cutting, joining and visualization of DNA fragments, cloning vectors and gene cloning; application of DNA technology in agriculture and health.

UNIT-4: Nucleic acid and protein sequence database (NCBI, gene bank and SWISS- PROT); Data mining and data mining tools (ENTREZ).

UNIT-5:Database search and sequence alignment. Tools of sequence alignment – FASTA and BLAST.

ZooMP- 605: Practical based on papers ZooMT- 603 and ZooMT- 604

UNIT 3: Detection / estimation of RNA

UNIT 6: Histological study of Lymphoid organs.

ZooMT- 606: Economic Zoology

UNIT-2: Life histories of silkworm (eri, muga and mulberry); culture technique of silkworms; diseases of silkworms and its prevention

UNIT-3: Life history of honey bee (*Apisindia*); rearing techniques of honeybee; Biology and culture of lac insect.

ZooMP- 607: Practical based on ZooMT- 606

UNIT 1: Identification of silkworms (eri, muga& mulberry), immature and adult stages

UNIT 8 Analysis of nutrients (Carbohydrate, Protein and Lipid) of Honey.

DEPARTMENT OF ZOOLOGY
(COURSE DISTRIBUTION FOR II, IV AND VI SEMESTER JANUARY-MAY 2020)

Dr. MONI KANKANA KALITA (Asst. Professor)

Semester II (Honours) CBCS
CCIII – Non-chordates II: Coelomates
UNIT – 5: Mollusca: General Characteristics and classification upto classes. Respiration in Mollusca,
Pearl formation in bivalves, evolutionary significance of trochophore larva.
CCIII-Practical- Non-Chordates II Coelomates
Unit 1: Study of specimens as per syllabus
Unit 5: To submit a Project Report on any related topic to larval forms (Crustacean, mollusca and
echinodermata)

CCIV –: Cell Biology
UNIT-1: Prokayotic and Eukaryotic cells, Virus, Viroids, Mycoplasma, Prions.
UNIT-2: Mitosis, Cell Cycle and its regulation.
UNIT – 3: Structure & functions: Golgi Bodies and Lysosomes.

CCIV – Practical: Cell Biology
Unit-4 Preparation of permanent slide to demonstrate:
a. Mucopolysaccharides by PAS reaction
b. Proteins by Mercurobromophenol blue/ Fast Green.

Semester II (Generic) CBCS
CCII-GE- VIII INSECT VECTORS AND DISEASES
Theory:
Unit IV: Dipteran as Disease Vectors: Study of house fly as important mechanical vector, Myiasis,
Control of house fly.
Unit V: Siphunculata as Disease Vectors: Human louse (Head, Body and Pubic louse) as important
insect vectors; Study of louse-borne diseases –Typhus fever, Relapsing fever, Trench fever,
Control of human louse.
Practical:
Unit 3: Study of different diseases transmitted by the insect vectors, as mentioned in the syllabus.
(*Aedes, Culex, Anopheles, Pediculushumanuscapitis, Pediculushumanuscorporis, Phithirus*

pubis, Xenopsyllacheopis, Cimexlectularius, Phlebotomusargentipes, Muscadomestica).
Unit 4: 4. Submission of a project report on any one of the insect vectors and disease transmitted.

Semester IV Major

Zoo MT- 401: Cell Biology, Histology &Histochemistry

UNIT 1: Overview of prokaryotic and eukaryotic cells, extra cellular matrix. Structure and functions of
chromosome; polytene and lamp brush chromosomes. chromatin- molecular organization, nucleosome.
UNIT 2: Heterochromatin and euchromatin; models of chromosomal movements
UNIT 5: Animal tissues- types and functions – Epithelium

ZooMP- 402: Practical based on ZooMT- 401

UNIT 2: Meiosis in testes of grasshopper and cockroach.

Zoo MT- 403: Developmental Biology

Unit-3: Cleavage and gastrulation- cleavage pattern, blastulation and gastrulation in chick. primary
organisers, induction, property and mechanism of action of inductive substances.

ZooMP- 404: Practical based on ZooMT- 403

UNIT 1: Study of permanent slides of different embryonic stages of frog/toad
UNIT 3: Submission of permanent stained preparation of (at least two stages up to 72 hrs. development
stages) chick embryo.

Semester IV General

Zoo MT- 401: Animal physiology and Endocrinology

Unit –2: Composition and constituents of blood groups and Rh factor.
Unit –3: Neurons and conduction of nerve impulse; drug addiction and its impact on society.
Uniu-4: Anatomy of Thyroid Gland
Unit –5: General character of hormones, feedback mechanism. Function of Thyroid Gland.

ZooGP- 402: Practical based on ZooGT- 401

Unit 3 : Blood group determination
Unit 5: Study of histological slides of endocrine glands

Semester VI Major

Zoo MT- 601: Parasitology and Ethology

UNIT 1: Life history and mode of infection and pathogenicity of *Trichomonasvaginalis& Plasmodium.*

UNIT 2: life history, parasitic adaptation and pathogenicity of *Taeniasolium, Ancylostoma duodenale.*

UNIT 4: Sense organs and behaviour; genetical and ecological aspects of behavior.

ZooMP- 602: Practical based on ZooMT- 601

UNIT 4: Study of habituation in mosquito larvae

ZooMT- 603: Molecular Biology and Immunology

UNIT 3: Concept of transposons and plasmids; regulation of gene expression in prokaryotes, operon concept (Lac operon).

UNIT 5: Clonal selection theory; polyclonal and monoclonal antibodies; major histocompatibility complex- structure and functions; immune system in health and disease.

ZooMT- 604: Biotechnology and Bioinformatics

UNIT-1: Introduction, history and scope, basic knowledge of genetic engineering, protoplast fusion and somatic hybridization technique.

UNIT-2: DNA sequencing, Human genome project.

UNIT-3: Methods of sequence alignment; phylogenetic analysis: basic concept, steps in evaluation of phylogeny and constructing phylogenetic trees.

ZooMP- 605: Practical based on papers ZooMT- 603 and ZooMT- 604

UNIT 7: Different e-resources and database search

UNIT 9: Creation of databases.

ZooMT- 606: Economic Zoology

UNIT-5: Piggery: management and practices of pig rearing; poultry: selection of breed (chicken and duck) and their scientific rearing methods; poultry diseases and its prevention/control.

ZooMP- 607: Practical based on ZooMT- 606

UNIT 6: Demonstration of induced breeding in fish.

UNIT 7: Apiculture- culture of honey bee and extraction of honey.

COURSE DISTRIBUTION

for the

ACADEMIC SESSION: 2020-21

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DIGBOI COLLEGE

DEP ARTMENT OF ASSAMESE

SYLLAUS DISTREBUTION, 2020-2021(ODD SEMESTER)

1st ,3rd and 5th semester(from July, 2020 to Dec, 2020)

1st semester

Paper code	Course title	unit	Name of the Teacher
C1	History of Assamese Literature (From the Begening to Post Sankardeva Period)	01	Dr. Mrinal kr. Gogoi
		02	Deepa Sarma Borthakur
		03	Dr. Lakshmi Devi
		04	Achyut Saikia
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
C2	History of Assamese Literature (From the Arunodoi to Post war Period)	01	Achyut Saikia
		02	Simanta Bordoloi
		03	Dr. Lakshmi Devi
		04	Deepa Sarma Borthakur
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
AECC	Communicative Assamese	01	Dr. Lakshmi Devi
		02	Dr. Mrinal Kr. Gogoi

3rd semester

Paper code	Course title	unit	Name of the Teacher
C5	Literary Criticism	01	Simanta Bordoloi
		02	Dr. Mrinal kr. Gogoi
		03	Simanta Bordoloi
		04	Achyut Saikia

Paper code	Course title	unit	Name of the Teacher
C6	Selection from Assamese poetry	01	Achyut Saikia
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Simanta Bordoloi
		05	Dr. Mrinal Kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
C7	Studies on the	01	Deepa Sarma Borthakur

	Culture of Assam	02	Dr. Mrinal kr. Gogoi
		03	Deepa Sarma Borthakur
		04	Dr. Lakshmi Devi

5th Semester.

Paper code	Course title	unit	Name of the Teacher
C11	Assamese Drama	01	Simanta Bordoloi
		02	Deepa Sarma Borthakur
		03	Deepa Sarma Borthakur
		04	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
C12	Studies on Assamese Linguistics	01	Dr. Mrinal kr. Gogoi
		02	Dr. Mrinal kr. Gogoi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

Paper code	Course title	unit	Name of the Teacher
DSE-1	Assamese Grammar,Lexicon and Idiomatic Usages	01	Dr. Lakshmi Devi
		02	Dr. Lakshmi Devi
		03	Dr. Lakshmi Devi
		04	Dr. Lakshmi Devi
		05	Dr. Lakshmi Devi

Paper code	Course title	unit	Name of the Teacher
DSE-2	Introduction to Indian Literature	01	Achyut Saikia
		02	Achyut Saikia
		03	Achyut Saikia
		04	Achyut Saikia
		05	Achyut Saikia

DEPARTMENT OF ASSAMESE

Syllabus DISTRIBUTION 2020-2021 (Even SEMESTER)

2nd, 4th and 6th semester (from Jan, 2021 to June, 2021)

2nd, semester

Paper code	Course title	unit	Name of the Teacher
C3	Introduction to Linguistics	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Dr.Lakshmi Devi
		04	Dr.Lakshmi Devi
		05	Deepa Sarma Borthakur & Dr. Lakshmi Devi

Paper code	Course title	unit	Name of the Teacher
C4	Poetics	01	Achyut Saikia
		02	Achyut Saikia & Simanta Bordoloi
		03	Dr. Mrinal kr. Gogoi
		04	Dr. Mrinal kr. Gogoi
		05	Dr. Mrinal kr. Gogoi

4th semester

Paper code	Course title	unit	Name of the Teacher
C8	Theory and Practice of Comparative Literature	01	Achyut Saikia
		02	Achyut Saikia
		03	Achyut Saikia
		04	Achyut Saikia
		05	Achyut Saikia

Paper code	Course title	unit	Name of the Teacher
C9	Indo-Aryan Languages and Assamese	01	Deepa Sarma Borthakur
		02	Deepa Sarma Borthakur
		03	Dr. Lakshmi Devi
		04	Dr. Lakshmi Devi

Paper code	Course title	unit	Name of the Teacher
C10	Selection from Assamese Prose	01	Dr. Mrinal kr. Gogoi
		02	Simanta Bordoloi
		03	Simanta Bordoloi
		04	Simanta Bordoloi
		05	Dr. Mrinal kr. Gogoi

6th semester

Paper Code	Course title	unit	Name of the Teacher
C13	Selection from Assamese Prose	01	Simanta Bordoloi
		02	Simanta Bordoloi
		03	Dr. Mrinal kr. Gogoi & Achyut Saikia
		04	Simanta Bordoloi
		05	Simanta Bordoloi

Paper code	Course title	unit	Name of the Teacher
C14	Language and Script of Assam	01	Deepa Sarma Borthakur
		02	Dr. Lakshmi Devi
		03	Deepa Sarma Borthakur
		04	Deepa Sarma Borthakur
		05	Dr. Lakshmi Devi

Paper code	Course title	unit	Name of the Teacher
DSE-3	Introduction to World Literature	01	Achyut Saikia
		02	Dr. Lakshmi Devi
		03	Achyut Saikia
		04	Achyut Saikia
		05	Dr. Lakshmi Devi

Paper code	Course title	unit	Name of the Teacher
DSE-4	Special Author	01	Dr. Mrinal kr. Gogoi

COURE DISTRIBUTION

DEPARTMENT OF BOTANY,EVENSEMESTER,2020

Name	Sem.	Honours/major	Sem.	Generic/general
Mrs J.S.Phukan	ii(H)	Core course-iv- Gymnosperms(Unit-6)& Related practicals	ii(G)	Phytogeography(Unit-5)
	iv(M)	Cell Biology(Unit-2)	iv(G)	Plant Physiology(Unit4,5)
	VI(M)	Paper-601&602	vi(G)	----------
Dr T.C.Dutta	ii(H)	Core course-iv Bryophytes(Unit-2&3)	ii(G)	Ecological Factors(Unit-2);Plant Communities(Unit-3)
	iv(M)	Cell Biology(Unit-1,3,4,5)	iv(G)	
	vi(M)	Paper-603 and related practicals	vi(G)	----------
Mr. D.M.Das	ii(H)	Core course course-iii- Mycology&Phytopathology& Related practicals.	ii(G)	Ecosystem(Unit-4)
	iv(M)	Modern Laboratory Technique	iv(G)	Plant Physiology(Unit-1,2,3,&6)
	vi(M)	Paper-606&607	vi(G)	----------
Dr.Mrs.D.Das	ii(H)	Core course-iv- Pteridophytes(Unit-4&5)& Related practicals	ii(G)	Taxonomy(Unit-6,7,8,9,10,11,12
	iv(M)	Paper-401&402	iv(G)	Economic Botany(Unit-1)
	vi(M)	Paper-604 & related practicals	vi(G)	----------

18/11/2020

HoD,Botany

Digboi College

DEPARTMENT OF CHEMISTRY

Course distribution: June 2020-Dec 2020

Semester I (CBCS)	Semester III (CBCS)	Semester V (Non CBCS)
Paper C-101 (Inorganic Chemistry)	**Paper C-301 (Inorganic Chemistry)**	**Paper MM-501 (Physical Chemistry)**
Unit 1: NH	Unit 1: NH	Unit I: NJK
Unit 2: NH	Unit 2: NH	Unit II: NJK
Unit 3: NH	Unit 3: NH	Unit III: NJK
Unit 4: NH	Unit 4: NH	Unit IV: JD
	Unit 5: NH	Unit V: JD
Paper C-102 (Physical Chemistry)	**Paper C-302 (Organic Chemistry)**	**Paper MM-503 (Inorganic Chemistry)**
Unit I: NJK	Unit I: BS	Unit I: NH
Unit II: NJK	Unit II: AM	Unit II: NH
Unit III: JD	Unit III: BS	Unit III: NH
Unit IV: JD	Unit IV: AM	Unit IV: NH
	Unit V: BS	
PaperGE-101		
(Inorganic Chemistry+ Organic Chemistry)	**Paper C-303 (Physical Chemistry)**	**Paper MM-505 (Organic Chemistry)**
Unit 1: NH	Unit I: NJK	Unit I: BS
Unit 2: NH	Unit II: NJK	Unit II: AM
Unit 3: AM	Unit III: JD	Unit III: BS
Unit 4: BS	Unit IV: JD	Unit IV: BS
Unit 5: AM		Unit V: AM
	Paper: GE 301	
	(Physical Chemistry+ Organic Chemistry)	**Paper MM-507(Symmetry and Quantum**
		Chemistry)
	Unit 1: NJK	
	Unit 2: NJK	Unit I: NH
	Unit 3: JD	Unit II: JD
	Unit 4: JD	Unit III: JD
	Unit 5: BS	
	Unit 6: BS	**Paper: NM 501**
	Unit 7: AM	**(Inorganic Chemistry + Physical Chemistry)**
	Unit 8: AM	
		First half
		Unit I: NH
		Unit II: NH
		Unit III: NH
		Second half
		Unit I: JD
		Unit II: JD
		Unit III: JD
		Unit IV: NJK
		Unit V: NJK
		Unit VI: NJK

JD: Mrs Jonali Dutta, NH: Mrs. Neelakshi Hazarika,NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia, AM: Dr. Abhijit Mahanta

DEPARTMENT OF CHEMISTRY

Course distribution: Session-Jan 2021-May 2021

Semester II (CBCS)	Semester IV (CBCS)	Semester VI (Non CBCS)
Paper C-201 (Organic Chemistry)	**Paper C-401 (Inorganic Chemistry)**	**Paper MM-601 (Physical Chemistry)**
Unit I: BS	Unit 1: NH	Unit I: JD
Unit II: BS	Unit 2: NH	Unit II: NJK
Unit III: AM	Unit 3: NH	Unit III:JD+NJK
Unit IV: AM	Unit 4: NH	Unit IV: NJK
Unit V: BS		Unit V: JD
Paper C-202 (Physical Chemistry)	**Paper C-402 (Organic Chemistry)**	**Paper MM-603 (Inorganic Chemistry)**
Unit I: NJK	Unit I: BS	Unit I: NH
Unit II: NJK	Unit II: BS	Unit II: NH
Unit III: JD	Unit III: AM	Unit III: NH
Unit IV: JD	Unit IV: AM	Unit IV: NH
	Unit V: AM	
Paper: GE-201(Physical		**Paper MM-605 (Organic Chemistry)**
Chemistry+ organic Chemistry)	**Paper C-403 (Physical Chemistry)**	
		Unit I: BS
	Unit I: JD	Unit II: BS
Unit 1: JD	Unit II: NJK	Unit III: BS
Unit 2: NJK	Unit III: NJK	Unit IV: AM
Unit 3: NJK		Unit V: AM
Unit 4: BS		Unit VI: AM
Unit 5: BS	**Paper: Chemistry GE 401**	
Unit 6: AM	**(Inorganic +Physical)**	**Paper MM-607(Molecular Spectroscopy)**
	Unit 1: NH	
	Unit 2: NH	Unit I: NH +JD
	Unit 3: NH	Unit II: JD
	Unit 4: NJK	Unit III: NH +JD
	Unit 5: NJK	Unit IV: JD
	Unit 6: JD	Unit IV: NH
	Unit 7: JD	
		Paper: NM 601
		(Organic Chemistry)
		Unit I: BS
		Unit II: BS
		Unit III:BS
		Unit IV: AM
		Unit V: AM
		Unit VI: AM

JD: Mrs Jonali Dutta, NH: Mrs. Neelakshi Hazarika, NJK: Dr. Nayan Jyoti Khound, BS: Dr Bishwajit Saikia, AM: Dr. Abhijit Mahanta

DEPARTMENT OF COMMERCE
Subject-wise Syllabus Distribution

Stream/ Subjects / Name Of The Faculty	SUBJECTS																Remarks
	HS 1ST YEAR		HS 2ND YEAR		B.COM 1 SEM		B.COM 3RD SEM					B.COM 5TH SEM					
	ACCY	BST	ACCY	BST	FA	BL	ITLP	MPA	HRM	BSTAT	ECOM	MA	ENTREP	DTAX	SM	RM	
PRADIP CH. DAS	Unit-IV,V,VII,VIII		A/B/Unit-I,V,VI		Unit-IV		Unit-I,II,V							Unit-I,II,III,IV			
DR. DEBORSHEE GOGOI		Unit III, VI, VII, VIII,XI, XII		Unit I, II, III, IX, X, XI		Unit IV, V		Unit I, V	Unit II, IV, V							Unit I, II, III, IV	
SAMPREETI BORUAH	Unit-VI,IX,X		B/Unit-I,II,III,IV		Unit-I, III		Unit-III,IV			Unit-II, IV		Unit-I,II,III	Unit-III,IV				
MURCHANA GOGOI	Unit-I,II,III		A/Unit-II,III,IV, V		Unit-II, V					Unit-I, V	Unit- II (half), III, V	Unit-IV	Unit-I,II				
SAMRAT BHARADWAJ		Unit I,II, IV,V, IX, X		Unit IV, V, VI, VII, VIII, XII		Unit I,II,III		Unit II, III, IV	Unit I, III	Unit-VI, III	Unit I, II(half), I V				Unit I, II, III, IV		

Pradip Chandra Das
Head,
Department of Commerce,
Digboi College

Faculty of Accounting and Finance

DEPARTMENT OF COMMERCE

Stream/ Subjects / Name Of The Faculty	SUBJECTS							
	HS 1ST YEAR	HS 2ND YEAR	B.COM 2nd SEM	B.COM 4th SEM		B.COM 6th SEM		
	ACCY	ACCY	CA	CA	AUD	DT-II	IFS	FSA
PRADIP CH. DAS	Unit-IV,V,VII,VIII	A/B/Unit-I,V,VI	Unit-IV	Unit-I,V	Unit-III	Unit-IV	Unit-II	Unit-III
SAMPREETI BORUAH	Unit-VI,IX,X	B/Unit-I,II,III,IV	Unit-I, III	Unit-III,IV	Unit-II, IV	Unit-III,IV	Unit-III,IV	Unit-IV
MURCHANA GOGOI	Unit-I,II,III	A/Unit-II,III,IV, V	Unit- II, V	Unit- II	Unit-I, II	Unit-I, II	Unit-I, II	Unit-I,II

(Faculty of Marketing)

Name of the faculty → / Class/ Semester / Subjects ↓		Dr. Deborshee Gogoi	Mr. Samrat Bharadwaj	Dr. Subhadeep Chakraborthy
B. Com 2nd Semester	Corporate Law	Unit 3	Unit 2 and 5	Unit 1 and 4
B. Com 4th Semester	Retail Management	Unit1 and 4	Unit 3	Unit 2
B. Com 6th Semester	International Marketing	N/A	N/A	All Units
	Advertising and Sales Promotion	All Units	N/A	N/A
	Rural Marketing	N/A	All Units	N/A

DEPARTMENT OF EDUCATION

COURSE DISTRIBUTION -2020-21
SEMESTER -V
UNIT ASSIGNED-ALL
Marks Assigned- 16 PER UNIT

NAME OF THE PAPER	**Name of the Teacher**	Remarks
EMERGING TRENDS IN INDIAN EDUCATION	**POBAN GOGOI**	
EDUCATIONAL IN WORD PERSPECTIVE	**PRADIP DUTTA**	
INCLUSIVE EDUCATION	**SNEHA GOGOI**	

Class/Semester-VI
UNIT ASSIGNED-ALL
MARK ASSIGNED -16 PER UNIT

NAME OF THE PAPER	**Name of the Teacher**	Remarks
EDUCATION IN POST-INDEPENDENT INDIA	**POBAN GOGOI**	
GENDER AND EDUCATION	**PRADIP DUTTA**	
MENTAL HEALTH EDUCATION	**SNEHA GOGOI**	
PROJECT REPORT	**RATIO-WISE DISTRIBUTED STUDENT TEACHER**	

DEPARTMENT OF HINDI

Course Distribution for the Session (June – December) 2020,

COURSE / UNIT	Dr. P K BHARATI	Dr. (Mrs.) A K SAHU
H.S.-I- MIL	Unit-I Apathit Bodh, Unit -III Gadya Khand & Vitan -1,	Unit -III Kavya Khand, Unit -II Rachanatmak Lekhan,Unit -IV-Moukhik Prikshan
H.S.-II –MIL	Unit -I Apathit Bodh, Unit -III Kavya Khand,	Unit -II Rachanatmak Lekhan or Jansanchar, Unit -III Gadya Khand & Vitan-2,
Sem.- I MIL	Unit -I Prachin Kavya, Unit -II Aadhunik Kavya,	Unit –III Kahani , Unit -IV Nibandh
Sem.-I (Hons.) C-1	Unit -I & Unit -II Hindi Sahitya ka Itihas (Bhakti Kaal	Unit -I Aadikaal, Unit –IV Ritikal
Sem.-I (Hons.) C-2	Unit –III & IV Hindi Gadya Ka Vikas Ewam Hindi Gadya ki Anya Vidhayen	Unit -I & Unit II Hindi Sahitya Ka Itihas (Aahunik Kal)
Sem.-I II(Hons.) C-5	Unit -I & Unit –II Chhayavaadottar Kavita	Unit -III & Unit –IV Chhayavaadottar Kavita
Sem.-I II(Hons.) C-6	Unit -I & Unit –II Bharatiya Kavyashastra	Unit -III & Unit –IV Bharatiya Kavyashastra
Sem.-I (Hons.) C-7	Unit -III & Unit –IV Paschaatya Kavyashatra Ewam Nai Samiksha	Unit -I & Unit –II Paschaatya Kavyashatra Ewam Nai Samiksha
Sem.-V (Major) 501	Unit- I & Unit- II, Alochana ke Swaroop, Shukla, Dwivedi & Sharma	Unit -III & Unit –IV Triveni, Pashchaatya Alochana
Sem.-V (Major)502	Unit -I & Unit –IV, Asamiya Sahitya ka Parichayatmak Itihas, Shankardev	Unit -II & Unit –III, Asamiya Sahitya ka Parichayatmak Itihas,
Sem.-V (Major)503	Unit -III & Unit –IV, Prayojanmoolak Hindi	Unit -I & Unit –II, Prayojanmoolak Hindi
Sem.-V (Major)504	Unit- III & Unit- IV, Sanchar Madhyam Lekhan,	Unit -I & Unit –II, Sanchar Madhyam Lekhan,

DEPARTMENT OF HINDI

Course Distribution for the Session (Jan– May) 2021,

COURSE / UNIT	Dr. P K BHARATI	Dr. (Mrs.) A K SAHU
H.S.-I- MIL	Unit-I Apathit Bodh, Unit -III Gadya Khand & Vitan -1,	Unit -III Kavya Khand, Unit -II Rachanatmak Lekhan,Unit -IV- Moukhik Prikshan
H.S.-II –MIL	Unit -I Apathit Bodh, Unit -III Kavya Khand,	Unit -II Rachanatmak Lekhan or Jansanchar, Unit -III Gadya Khand & Vitan-2,
Sem.-I I(Hons.) C-3	Unit -I & Unit -II Aadikaaleen Ewam Madhyakaleen Kavita	Unit -III & Unit –IV Aadikaaleen Ewam Madhyakaleen Kavita
Sem.-I I (Hons.) C-4	Unit -I & Unit -II Aadhunik Hindi Kavita (Chhayaavaad Tak)	Unit -III & Unit –IV Aadhunik Hindi Kavita (Chhayaavaad Tak)
Sem.-I V (Hons.) C-8	Unit -III & Unit- IV Bhasha Vigyan aur Hindi Bhasha	Unit -I & Unit -II Bhasha Vigyan aur Hindi Bhasha
Sem.-I V (Hons.) C-9	Unit -II & Unit –IV Hindi Upanyas (Tyagapattra & Mahaboj)	Unit –I & Unit –III Hindi Upanyas (Gaban & Maanas Kaa Hans)
Sem.-I V (Hons.) C-10	Unit -I & Unit -II Hindi Kahani	Unit -III & Unit –IV Hindi Kahani
Sem.-VI (Major) 601	Unit -II Aashunik Hindi Kavya	Unit-I, Aashunik Hindi Kavya
Sem.-VI (Major) 602	Unit -III & Unit –IV , Bhasha- Vigyan, Hindi Bhasha Ewam Lipi	Unit- I & II, Bhasha- Vigyan, Hindi Bhasha Ewam Lipi
Sem.-VI (Major) 603	Unit -III & Unit –IV Anuwad Vigyan, Anuvad Ke Upakaran	Unit -I & Unit -II , Anuvad ki Paribhasha, Anuvad ki Prakriya
Sem.-VI (Major) 604	Unit -I & Unit -II Tulasi Sahitya (Vishesh Pattra), Ayodhya Kand	Unit -III & Unit –IV, Tulasi Sahitya (Vishesh Pattra), Vinay Patrika,

DEPARTMENT OF HISTORY (COURSE DISTRIBUTION)

SESSION-2020

SEMESTER I

COURSE: HISGE1 HISTORY OF ASSAM 1228-1826

P.K.Narah: Unit I – Unit III(3.02)

A.Neog : Unit III(3.03) – Unit V

SEMESTER III

COURSE:HISGE 3 HISTORY OF INDIA 1526-1947

P.K.Narah: Unit I – Unit III(3.01)

A.Neog : Unit III(3.02) – Unit V

SEMESTER V

COURSE: V HISTORY OF INDIA 1526-1947

P.K.Narah: Unit I – Unit III(3.01)

A.Neog : Unit III(3.02) – Unit V

DEPARTMENT OF HISTORY (COURSE DISTRIBUTION)

SESSION-2021

SEMESTER II

COURSE: HISGE2 HISTORY OF INDIA FROM THE EARLIEST TIMES TO 1526

P.K.Narah: Unit I – Unit III(3.03)

A.Neog : Unit III(3.04) – Unit V

SEMESTER IV

COURSE:HISGE 4.1 HISTORY OF MODERN ASSAM (1826-1947)

P.K.Narah: Unit I – Unit III(3.03)

A.Neog : Unit III(3.04) – Unit V

SEMESTER VI

COURSE: VI (OPTIONAL-II) WOMEN IN INDIAN HISTORY

P.K.Narah: Unit I – Unit III(3.02)

A.Neog : Unit III(3.03) – Unit V

Department of Physics, Digboi College

Course Distribution

From July to December 2020

(Odd Semester)

B. SC. 1st SEMESTER (HONS) (CBCS)

Paper Code	Title	Name of Faculty
C - I	Mathematical Physics-I (Theory)	Dr Rashmi Patowary Parvind Kr Sahu
C - I	Mathematical Physics-I (Lab)	Dr Rashmi Patowary Parvind Kr Sahu
C - II	Mechanics (Theory	Dr K Konwar Dr Deep Kr Kuri
C - II	Mechanics (Lab)	Dr K Konwar Dr Deep Kr Kuri

B. SC. 1st SEMESTER (GENERIC) (CBCS)

Paper Code	Title	Name of Faculty
GE - I	Mechanics (Theory)	Dr K Konwar Dr Deep Kr Kuri
GE - I	Mechanics (Lab)	Dr K Konwar Dr Deep Kr Kuri

B. SC. 3rd SEMESTER (HONS) (CBCS)

Paper Code	Title	Name of Faculty
C - V	Mathematical Physics-II (Theory)	Dr Rashmi Patowary
C - V	Mathematical Physics-II (Lab)	Dr Rashmi Patowary
C - VI	Thermal Physics (Theory)	Dr Deep Kr Kuri
C - VI	Thermal Physics (Lab)	Dr Deep Kr Kuri
C - VII	Digital Systems and Applications (Theory)	Dr K Konwar
C - VII	Digital Systems and Applications (Lab)	Dr K Konwar

B. SC. 3rd SEMESTER (GENERIC) (CBCS)

Paper Code	Title	Name of Faculty
GE - III	Thermal Physics and Statistical Mechanics (Theory)	Dr Deep Kr Kuri
GE - III	Thermal Physics and Statistical Mechanics (Lab)	Dr Deep Kr Kuri

B. SC. 5th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 501	Mathematical Physics II	Dr R Patowary
PHYM - 502	Electrodynamics & Special Relativity	Dr. Deep Kr Kuri
PHYM - 503	Atomic & Molecular Physics	Dr Sumi Bhuyan
PHYM - 504	Electronics	Dr. K Konwar
PHYM - 505	Laboratory	Dr. K Konwar

B. SC. 5th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 501	Atomic and Nuclear Physics	Dr R Patowary Dr. Sumi Bhuyan

M. SC. 1st SEMESTER (CBCS) (3rd Batch)

Paper Code	Title	Name of Faculty
C - I	Mathematical Physics	Dr Rashmi Patowary
C - II	Quantum Mechanics	Dr Deep Kr Kuri
C - III	General Lab-I	Dr K Konwar
DSE - I B	Atmospheric Physics	Dr Rashmi Patowary Dr Sumi Bhuyan
AEC - I C	Nano Structured Materials	Parvind Kr Sahu

M. SC. 3rd SEMESTER (CBCS) (2nd Batch)

Paper Code	Title	Name of Faculty
C - VII	Electronics	Dr K Konwar
C - VIII	Electrodynamics	Dr Deep Kr Kuri
C - IX	Computational Methods	Dr Rashmi Patowary
DSE - III B	Condensed Matter Physics I	Dr Sumi Bhuyan Dr Dibyajyoti Kakoti
GE - II **GE 305**	Green and Sustainable Chemistry	Dr Abhijit Mahanta (Full Paper)
AEC - II E	Meteorology	Dr Rashmi Patowary

Course Distribution
From January to June 2021
(Even Semester)

B. SC. 2nd SEMESTER (HONS) (CBCS)

Paper Code	Title	Name of Faculty
C - III	Electricity and Magnetism (Theory)	Dr K Konwar Dr Deep Kr Kuri
C - III	Electricity and Magnetism (Lab)	Dr K Konwar Dr Deep Kr Kuri
C - IV	Waves and Optics (Theory)	Dr Rashmi Patowary Dr Sumi Bhuyan
C - IV	Waves and Optics (Lab)	Dr Rashmi Patowary Dr Sumi Bhuyan

B. SC. 2nd SEMESTER (GENERIC) (CBCS)

Paper Code	Title	Name of Faculty
GE - 2	Electricity And Magnetism (Theory)	Dr K Konwar Dr Deep Kr Kuri
GE - 2	Electricity And Magnetism (Lab)	Dr K Konwar Dr Deep Kr Kuri

B. SC. 4th SEMESTER (HONS) (CBCS)

Paper Code	Title	Name of Faculty
C - VIII	Mathematical Physics - III (Theory)	Dr Rashmi Patowary
C - VIII	Mathematical Physics - III (Lab)	Dr Rashmi Patowary
C - IX	Elements of Modern Physics (Theory)	Dr Deep Kr Kuri
C - IX	Elements of Modern Physics (Lab)	Dr Deep Kr Kuri
C - X	Analog Systems and Applications (Theory)	Dr K Konwar
C - X	Analog Systems and Applications (Lab)	Dr K Konwar

B. SC. 4th SEMESTER (GENERIC) (CBCS)

Paper Code	Title	Name of Faculty
GE - 4	Waves and Optics (Theory)	Dr Sumi Bhuyan
GE - 4	Waves and Optics (Lab)	Dr Sumi Bhuyan

B. SC. 6th SEMESTER (MAJOR) (NCBCS)

Paper Code	Title	Name of Faculty
PHYM - 601	Statistical Mechanics	Dr Deep Kr Kuri
PHYM - 602	Condensed Matter Physics	Dr Sumi Bhuyan
PHYM - 603	Nuclear Physics	Dr Rashmi Patowary
PHYM - 604	Laser and its Application	Dr. Kanchan Konwar
PHYM - 605	Laboratory	Dr. Kanchan Konwar

B. SC. 6th SEMESTER (GENERAL) (NCBCS)

Paper Code	Title	Name of Faculty
PHYG - 601	Electronics & Solid state Physics	Dr. Kanchan Konwar Dr. Sumi Bhuyan
PHYG - 602	Practical -III	Dr. Kanchan Konwar Dr. Sumi Bhuyan

M. SC. 2nd SEMESTER (CBCS) (2nd Batch)

Paper Code	Title	Name of Faculty
C - IV	Classical Mechanics	Dr Deep Kr Kuri
C - V	Condensed Matter Physics	Dr Sumi Bhuyan Dr Dibyajyoti Kakoti
C - VI	General Lab-II	Dr. Kanchan Konwar
DSE - II A	Plasma Physics	Dr Rashmi Patowary
GE - I (GE-205)	Material Chemistry	Dr Abhijit Mahanta (Full Paper)

M. SC. 4th SEMESTER (CBCS) (1st Batch)

Paper Code	Title	Name of Faculty
C - X	Nuclear Physics	Dr R Patowary (Full Paper)
C - XI	Statistical Mechanics	Dr Deep Kr Kuri (Full Paper)
C - XII	Atomic & Molecular Physics	Dr K Konwar
DSE - IV B	Condensed Matter Physics II	Dr Sumi Bhuyan Dr Dibyajyoti Kakoti
DSE - V B	Condensed Matter Physics Lab	Dr Sumi Bhuyan Dr Dibyajyoti Kakoti

DEPARTMENT OF ZOOLOGY
[COURSE DISTRIBUTION FOR I (CBCS), III (CBCS) AND V(Non-CBCS) SEMESTER]
[August- Dec 2020]

RAJIB RUDRA TARIANG (Head)

Semester I (Honours) CBCS

Course Code: ZC101T

CORE COURSE I: NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES

THEORY:

Unit 2: Porifera **7**

General characteristics and Classification up to classes Canal system and spicules in sponges.

Unit 5: Platyhelminthes **10**

General characteristics and Classification up to classes Life cycle and pathogenicity of *Fasciola hepatica* and *Taenia solium.*

Course Code: ZC101P

NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES

PRACTICALS:

3. Study of Sycon (T.S. and L.S.), *Hyalonema, Euplectella, Spongilla*.
5. Study of adult *Fasciola hepatica*, *Taenia solium* and their life cycles (Slides/microphotographs)

Course Code: ZC102T

CORE COURSE II: PRINCIPLES OF ECOLOGY

THEORY:

Unit 4: Ecosystem **14**

Types of ecosystems with one example in detail (Forest ecosystem), Food chain: Detritus and grazing food chains, Linear and Y-shaped food chains, Food web, Energy flow through the ecosystem, Ecological pyramids and Ecological efficiencies.

Unit 5: Applied Ecology **4**

Concept of wildlife conservation (Usefulness, causes and consequences of degradation); Management strategies

Course Code: ZC102P

PRINCIPLES OF ECOLOGY

PRACTICALS:

2. Determination of population density in a natural/hypothetical community by quadrate method and calculation of Shannon-Weiner diversity index for the same community.
4. Report on a visit to National Park/Biodiversity Park/Wild life sanctuary/Reserved forest

Semester I (Generic) CBCS

GE II:
ANIMAL DIVERSITY

Theory:

Unit 2. Porifera 3
General characters and canal system in Porifera.

Unit 4. Aceolomates 3
General characters of Helminthes; Life cycle of *Taenia solium*

Unit 7. Arthropoda 4
General characters. Social life in insects

Practical:

Unit 1: Study of following specimens:
Sycon, Taenia, Peripatus, Limulus, Hermit crab, Daphnia, Millipede, Centipede, Beetle
Unit 2: Dissections of Digestive and nervous system of Cockroach

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Semester III (Honours) CBCS

CORE COURSE V:
DIVERSITY OF CHORDATA

Theory:

Unit 4: Agnatha **2**
General characteristics and classification of cyclostomes up to class

Unit 5:Pisces **8**
General characteristics of Chondrichthyes and Osteichthyes, classification upto order Migration, Osmoregulation and Parental care in fishes.

Unit 7: REPTILIA **7**
General characteristics and classification up to order; Affinities of Sphenodon; Poison apparatus and Biting mechanism in snakes.

Course Code: ZC305P
DIVERSITY OF CHORDATA

Practical:

1. Identification :
   (ii) Agnatha :: Petromyzon, Myxine;
   (iii) Fishes :: Scoliodon, Sphyrna, Pristis, Torpedo, Chimaera, Mystus, Heteropneustes, Labeo, Exocoetus, Echeneis, Anguilla, Hippocampus, Tetrodon/ Diodon, Anabas, Flat fish**.**
   (v) Reptilia Chelone, Trionyx, Hemidactylus, Varanus, Uromastix, Chamaeleon, Ophiosaurus, Draco, Bungarus, Vipera, Naja, Hydrophis, Zamenis, Crocodylus
2. Key for Identification of poisonous and non-poisonous snakes

Course Code: ZC306T
CORE COURSE VI:
ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS

Theory:

Unit 6: Endocrine System **18**

Histology of endocrine glands - pineal, pituitary, thyroid, parathyroid, pancreas, adrenal; hormones secreted by them and their mechanism of action; Classification of hormones; Regulation of their secretion; Mode of hormone action, Signal transduction pathways for steroidal and nonsteroidal hormones; Hypothalamus (neuroendocrine gland) - principal nuclei involved in neuroendocrine control of anterior pituitary and endocrine system; Placental hormones.

Course Code: ZC306P
ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS

PRACTICALS:

4. Study of permanent slides of Pituitary, Pancreas, Testis, Ovary, Adrenal, Thyroid and Parathyroid.

Course Code: ZC307T
CORE COURSE VII:
FUNDAMENTALS OF BIOCHEMISTRY

THEORY:

Unit 4: Nucleic Acids **12**

Structure: Purines and pyrimidines, Nucleosides, Nucleotides, Nucleic acids Cot Curves: Base pairing, Denaturation and Renaturation of DNA Types of DNA and RNA, Complementarity of DNA, Hpyo-Hyperchromaticity of DNA.

https://library.med.utah.edu/NetBiochem/pupyr/pp.htm

Course Code: ZC307P
FUNDAMENTALS OF BIOCHEMISTRY

PRACTICAL:

1. Qualitative tests of functional groups in carbohydrates.

Semester III GENERIC:

GE VII: HUMAN PHYSIOLOGY

THEORY (CREDITS 4)

Unit 1: Digestion and Absorption of Food 12

Structure and function of digestive glands; Digestion and absorption of carbohydrates, fats and proteins; Nervous and hormonal control of digestion (in brief).

Unit 6: Endocrine and Reproductive Physiology 14

Structure and function of endocrine glands (pituitary, thyroid, parathyroid, pancreas, adrenal).

PRACTICAL:

Study of permanent histological sections of mammalian oesophagus, stomach, duodenum, rectum, lung, kidney, thyroid, pancreas, adrenal, testis, ovary.

SEMESTER-V Major

ZooMT- 501: Genetics and Evolution

Unit-4: Evidences and theories of evolution- palaeo-biological and molecular evidences; Lamarckism, Darwinism, Neo Darwinism, Mutation theory and Modern Synthetic theory; origin of life (chemical and biological origin); variation- types and sources; isolation; speciation (sympatric, allopatric and peripatric); fossil and fossilization.

Unit-5: Concept of population- gene pool and gene frequency (Hardy- Weinberg law).

ZooMP- 502: Practical based on ZooMT- 501

1. Polytene chromosome of chironomus or Drosophila larvae

ZooMT- 503: Animal Physiology

Unit-2: Digestion- site and sequence of digestion; digestive secretions and their regulation; mechanism of digestion and absorption of carbohydrates, proteins and lipids; role of gastro-intestinal hormones, balanced diet.

Unit-3: Excretion- structure and functions of nephron; renal blood supply; mechanism and regulation of urine formation; renal failure and dialysis.

ZooMP- 504: Practical based on ZooMT- 503

1. Preparation of Haemin crystals
2. Demonstration of osmosis using toad/frog urinary, bladder/alimentary canal.

ZooMT- 505: Environmental Biology and Wildlife

Unit-3: Basic concept of remote sensing and EIA.

Unit-5: IUCN status of species category; important endangered species of N.E. India - rhinoceros, tiger, golden langur, dancing deer, river dolphin, pigmy hog, white winged wood duck and golden mahseer (*Tor* spp.); threats to biodiversity; man-wildlife conflict; *ex-situ* and *insitu* conservation strategies; major national parks of NE India; concept of biosphere reserve and biodiversity hot spot; Indian Wildlife Protection Act, 1972.

ZooMP- 506: Practical based on ZooMT- 505

1. Estimation of the size of the population by capture-recapture method (any vertebrate/invertebrate).

ZooMT- 507: Endocrinology

Unit-1: Comparative anatomy of **pituitary**, in fish, amphibia, birds and mammals.

Unit-2: Hormones secreted by endocrine glands (**pituitary**) and their functions in mammals.

ZooMP- 508: Practical based on ZooMT- 507

1. Submission of chart/models related to

SEMESTER-V GENERAL

ZooGT- 501: Genetics and Molecular Biology

Unit-3: Nucleic acids, DNA as genetic material, structure and functions of DNA and RNA

Unit-4: Basic steps of transcription and translation.

ZooGP- 502: Practical based on ZooGT- 501

1.Preparation of slides for study of mitosis and meiosis using suitable material

DEPARTMENT OF ZOOLOGY
(COURSE DISTRIBUTION FOR II, IV AND VI SEMESTER JANUARY-MAY 2020)

APARAJITA GOGOI (Associate Professor)

Semester I (Honours) CBCS

Course Code: ZC101T
CORE COURSE I: NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES

THEORY:
Unit 6: Nemathelminthes
8
General characteristics and Classification up to classes Life cycle, and pathogenicity of *Ascaris lumbricoides* and *Wuchereriabancrofti.* Parasitic adaptations in helminthes.

Course Code: ZC101P
NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES
PRACTICALS:
6. Study of adult *Ascaris lumbricoides* and its life stages (Slides/micro-photographs)
7. To submit a Project Report on any related topic based on theory syllabus.

Course Code: ZC102T
CORE COURSE II: PRINCIPLES OF ECOLOGY

THEORY:
Unit 3: Community
12
Community characteristics: species richness, dominance, diversity, abundance, vertical stratification, Ecotone and edge effect; Ecological succession with hydrosere Theories pertaining to climax community.

Course Code: ZC102P
PRINCIPLES OF ECOLOGY

PRACTICALS:
3. Study of an aquatic ecosystem: Phytoplankton and zooplankton, Measurement of area, temperature, turbidity/penetration of light.
4. Report on a visit to National Park/Biodiversity Park/Wild life sanctuary/Reserved forest.

Semester I (Generic) CBCS

GE II:
ANIMAL DIVERSITY

Theory:
Unit 8. Mollusca 3
General characters of mollusca; Pearl Formation.
Unit 12. Amphibia 4
General characters, Adaptations for terrestrial life, Parental care in Amphibia.

Unit 14. Aves 5

The origin of birds; Flight adaptations

Unit 15. Mammalia 6

Early evolution of mammals; Primates; Dentition in mammals.

Practical:

1. Study of the following specimens.
   Chiton, Dentalium, Octopus, Icthyophis/Uraeotyphlus, Salamander, Rhacophorus, any three common birds-(Crow, duck, Owl), Squirrel and Bat.

Semester III Zoology Core CBCS

Course Code: ZC305T

CORE COURSE V:

DIVERSITY OF CHORDATA

Theory:

Unit 6:Amphibia **6**

Origin of Tetrapoda (Evolution of terrestrial ectotherms); General characteristics and classification up to order; Parental care in Amphibians.

Unit 9: Mammals **8**

General characters and classification up to order; Affinities of Prototheria; Adaptive radiation with reference to locomotory appendages.

Practical:

(iv) Amphibia Ichthyophis/Ureotyphlus, Necturus, Bufo, Hyla, Alytes, Salamandra.
(vi) Aves Study of six common birds from different orders. Types of beaks and claws
Dissection: Pecten from Fowl head

Course Code: ZC306T

CORE COURSE VI:

ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS

Theory:

Unit 2: Bone and Cartilage **4**

Structure and types of bones and cartilages, Ossification, bone growth and resorption.

Unit 3: Nervous System **10**

Structure of neuron, resting membrane potential, Origin of action potential and its propagation across the myelinated and unmyelinated nerve fibers; Types of synapse, Synaptic transmission and, Neuromuscular junction; Reflex action and its types - reflex arc; Physiology of hearing and vision.

Course Code: ZC306P

ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS

Practical:

4. Study of permanent slides of Mammalian skin, Cartilage, Bone, Spinal cord, Nerve cell.

Course Code: ZC307T

CORE COURSE VII:

FUNDAMENTALS OF BIOCHEMISTRY

THEORY:

Unit 3: Proteins **14**

Amino acids: Structure, Classification and General properties of α-amino acids; Physiological importance of essential and non-essential α-amino acids

Proteins: Bonds stabilizing protein structure; Levels of organization in proteins; Denaturation; Introduction to simple and conjugate proteins

Immunoglobulins: Basic Structure, Classes and Function, Antigenic Determinants.

Course Code: ZC307P
FUNDAMENTALS OF BIOCHEMISTRY

PRACTICAL:

1. Qualitative tests of functional groups in proteins.
2. Paper chromatography of amino acids

Semester III GENERIC:

GE VII: HUMAN PHYSIOLOGY

THEORY
(CREDITS 4)

Unit 2: Functioning of Excitable Tissue (Nerve and Muscle) 10

Structure of neuron, Propagation of nerve impulse (myelinated and non-myelinated nerve fibre); Structure of skeletal muscle, Mechanism of muscle contraction (Sliding filament theory), Neuromuscular junction.

PRACTICAL
(CREDITS 2)

1. Preparation of temporary mounts: Neurons and Blood film

SEMESTER-V **MAJOR**

ZooMT- 501: Genetics and Evolution

Unit-1: Mendel's law of inheritance and their critical analysis; gene and allele concept: Physical basis of heredity; interaction of genes, incomplete dominance, complementary factors, supplementary factors, epistasis, inhibitory factors, lethal factors; quantitative genetics.

ZooMP- 502: Practical based on ZooMT- 501

1. Simple calculation based on Mendel's monohybrid/dihybrid cross/test cross.

ZooMT- 503: Animal Physiology

Unit-1: Muscle and its contraction- molecular composition of myofilaments; sarcoplasmic reticulum and T- tubules; mechanism of muscle contraction; characteristic of muscle twitch- isometric and isotonic contractions; summation and tetanus.

ZooMP- 504: Practical based on ZooMT- 503

1. Demonstration of knee jerk reflex
2. Recording of muscle twitch.

ZooMT- 505: Environmental Biology and Wildlife

Unit-1: Concepts pertaining to ecosystem, species, community, biome and ecotone; biotic and abiotic environmental factors and their effect on animals; trophic relations and energy flow.

ZooMP- 506: Practical based on ZooMT- 505

1. Find out the abundance and density of insect pests in some essential food commodities.
2. Find out the abundance and densities of terrestrial invertebrates/macrophyte associated fauna by Quadrate method.

ZooMT- 507: Endocrinology

Unit-1: Comparative anatomy of **thyroid** in fish, amphibia, birds and mammals.

Unit-2: Hormones secreted by endocrine glands **thyroid** and their functions in mammals.

Unit-3: General characters of hormones; mechanism of action of hormones; regulation of hormone secretion; hypothalamo-hypophysial system; disorders associated with hypo and hyper secretion of hormones.

ZooMP- 508: Practical based on ZooMT- 507

1. Study of permanent slides of endocrine glands

SEMESTER-V **GENERAL**

ZooGT- 501: Genetics and Molecular Biology

Unit –1: Principles of heredity; Mendel's laws; linkage and crossing over; non-chromosomal inheritance; sex determination in animals.

ZooGP- 502: Practical based on ZooGT- 501

2. Mendelian problems on monohybrid and dihybrid cross

DEPARTMENT OF ZOOLOGY
(COURSE DISTRIBUTION FOR I, III AND V SEMESTER AUGUST-JANUARY 2020)

Dr. KISHOR HALOI (Asst. Professor)

Semester I (Honours) CBCS

Course Code: ZC101T
CORE COURSE I: NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES

THEORY:

Unit 1: Protista, Parazoa and Metazoa **19**

General characteristics and Classification up to Classes Structural organization & nutrition of Euglena, Amoeba and Paramecium Life cycle and pathogenicity of Plasmodium vivax Locomotion and Reproduction in Animal protista (Protozoa) Evolution of symmetry and segmentation of Metazoa.

Course Code: ZC101P
NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES

PRACTICALS:

1. Study of whole mount of Euglena, Amoeba and Paramecium, Binary fission and Conjugation in Paramecium
2. Examination of pond water collected from different places for diversity in Animal protista (Protozoa)

Course Code: ZC102T
CORE COURSE II: PRINCIPLES OF ECOLOGY

THEORY:

Unit 1: Introduction to Ecology
6

History of ecology, Autecology and synecology, Levels of organization, Laws of limiting factors, Study of abiotic factors

Unit 2: Population
12

Unitary and Modular populations Unique and group attributes of population: Density, natality, mortality, life tables, fecundity tables, survivorship curves, age ratio, sex ratio, dispersal and dispersion Exponential and logistic growth, equation and patterns, r and K strategies.

Course Code: ZC102P
PRINCIPLES OF ECOLOGY

PRACTICALS:

1. Study of life tables and plotting of survivorship curves of different types from the hypothetical/real data provided.
2. Report on a visit to National Park/Biodiversity Park/Wild life sanctuary/Reserved forest

Semester I (Generic) CBCS

GE II:
ANIMAL DIVERSITY

Theory:

Unit 1. Protista: 4
General characters of Protozoa; Life cycle of Plasmodium.

Unit 5. Pseudocoelomates 3
General characters of Nemethehelminthes; Parasitic adaptations.

Unit 9. Coelomate Deuterostomes. 3
General characters of Echinodermata, Water Vascular system in Starfish.

Unit 10. Protochordata 2
Salient features

Practical:

1. Study of the following specimens:
   Euglena*, Noctiluca, Paramecium, Ascaris, Asterias*, and *Antedon, Balanoglossus, Amphioxus,*
2. Temporary mounts of Septal& pharyngeal nephridia of earthworm. Unstained mounts of Placoid, cycloid and ctenoid scales.
3. Dissection of Urinogenital system of Rat

Semester III Zoology Core CBCS

Course Code: ZC305T
CORE COURSE V:
DIVERSITY OF CHORDATA

Theory:

Unit 1: Introduction to Chordates **2**
General characteristics and outline classification

Unit 2: Protochordata **8**
General characteristics of Hemichordata, Urochordata and Cephalochordata; Study of larval forms in protochordates; Retrogressive metamorphosis in Urochordata

Unit 3: Origin of Chordata **3**
Dipleurula concept and the Echinoderm theory of origin of chordates Advanced features of vertebrates over Protochordata.

Practical:

(i) Protochordata Balanoglossus, Herdmania, Branchiostoma, Colonial UrochordataSections of Balanoglossus through proboscis and branchiogenital regions, Sections of Amphioxus through pharyngeal, intestinal and caudal regions. Permanent slide of Herdmania spicules.

(ii) Dissection of weberian ossicles of Mystus.

Course Code: ZC306T
CORE COURSE VI:
ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS

Theory:

Unit 1: Tissues **6**
Structure, location, classification and functions of epithelial tissue, connective tissue,

muscular tissue and nervous tissue.

Unit 5: Reproductive System **10**

Histology of testis and ovary; Physiology of male and female reproduction; Puberty, Methods of contraception in male and female.

Course Code: ZC306P

ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS

Practical:

1. Preparation of temporary mounts: Squamous epithelium, Striated muscle fibres and nerve cells.

5. Microtomy: Preparation of permanent slide of any five mammalian (Goat/white rat) tissues.

Course Code: ZC307T

CORE COURSE VII:

FUNDAMENTALS OF BIOCHEMISTRY

THEORY:

Unit 5: Enzymes 18

Nomenclature and classification; Cofactors; Specificity of enzyme action; Isozymes; Mechanism of enzyme action; Enzyme kinetics; Factors affecting rate of enzyme-catalyzed reactions; Derivation of MichaelisMenten equation, Concept of Km and Vmax, Lineweaver-Burk plot; Multisubstrate reactions; Enzyme inhibition; Allosteric enzymes and their kinetics; Regulation of enzyme action.

Course Code: ZC307P

FUNDAMENTALS OF BIOCHEMISTRY

PRACTICAL:

4. Effect of pH, temperature and inhibitors on the action of salivary amylase.
5. Demonstration of proteins separation by SDS-PAGE (theoretically).

SEM III GENERIC **GE VII: HUMAN PHYSIOLOGY**

THEORY

(CREDITS 4)

Unit 3: Respiratory Physiology

6

Ventilation, External and internal Respiration, Transport of oxygen and carbon dioxide in blood, Factors affecting transport of gases.

Unit 6: Endocrine and Reproductive Physiology

14 -7 = 7*

Structure and function of endocrine glands (ovaries, and testes), Brief account of spermatogenesis and oogenesis, Menstrual cycle.

PRACTICAL:

2. Preparation of haemin and haemochromogen crystals.

SEMESTER-V **MAJOR**

ZooMT- 501: Genetics and Evolution

Unit-3:
Concept of gene and their fine structures; chromosomal (numerical and structural) and gene mutation, types, genetic significance of mutation and practical implications; Human genetics: human as a genetic material, autosome and sex chromosomes, recessive and dominant trades, inborn error in metabolism, human chromosome, human genome project.

ZooMP- 502: Practical based on ZooMT- 501

1. Study of chromosomal slides of suitable materials.

ZooMT- 503: Animal Physiology

Unit-4: Circulation- coronary circulation; origin and conduction of cardiac impulse; cardiac cycle; cardiac output and its regulation; disorders of cardio-vascular system; haemostasis; respiration- structure and functions of haemoglobin; O_2 and CO_2 transport by blood; regulation of respiration; carbon monoxide poisoning; tracheal respiration in insects.

ZooMP- 504: Practical based on ZooMT- 503

1. Determination of R.Q. of cockroach/Goroi fish.
2. Recording of heart beat of frog by kymograph.

ZooMT- 505: Environmental Biology and Wildlife

Unit-2: Shelfords law of tolerance; Liebig's law of minimum; concept of productivity; population structure and dynamics; exponential and logistic growth; **r** and **k** strategies and multidimensional niche concept; Lotka-Volterra model; natality and mortality; predator & prey relationship.

Unit-3:Biogeochemical cycles (carbon, nitrogen, phosphorus and hydrological cycles); Renewable and non-renewable resources of N.E. India and strategy for their sustainable utilization.

ZooMP- 506: Practical based on ZooMT- 505

Determination of dissolved Oxygen/CO_2 /Alkalinity in the water samples.**ZooMT- 507: Endocrinology**

Unit-1: Comparative anatomy of **adrenal** in fish, amphibia, birds and mammals.

Unit-2: Hormones secreted by endocrine glands (**adrenal**) and their functions in mammals.

Unit-5: Neuroendocrine system in insects; role of hormones in growth and development of insects

ZooMP- 508: Practical based on ZooMT- 507

1. Dissect and display the following endocrine gland in fish/birds: pituitary, thyroid, adrenal

SEMESTER-V GENERAL

ZooGT- 501: Genetics and Molecular Biology

Unit –2: Concept of gene; mutation, chromosomal aberrations, mutagens and their application.

Unit-4: Concept of central dogma, genetic code

ZooGP- 502: Practical based on ZooGT- 501

1. Ball and stick model for nucleotides

DEPARTMENT OF ZOOLOGY
(COURSE DISTRIBUTION FOR I, III AND V SEMESTER]
[August-January 2020)

Dr. MONI KANKANA KALITA (Asst. Professor)

Semester I (Honours) CBCS

Course Code: ZC101T
CORE COURSE I: NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES

THEORY:

Unit 3: Cnidaria **12**

General characteristics and Classification up to classes. Metagenesis in *Obelia* Polymorphism in Cnidaria Corals and coral reefs.

Unit 4: Ctenophora **4**

General characteristics and Evolutionary significance.

Course Code: ZC101P
NON-CHORDATES I: PROTISTS TO PSEUDOCOELOMATES

PRACTICALS:

4. Identification of museum specimen: *Obelia, Physalia, Millepora, Aurelia, Tubipora, Corallium, Alcyonium,Gorgonia, Metridium, Pennatula, Fungia, Meandrina, Madrepora* and One specimen/slide of any ctenophore.

Course Code: ZC102T
CORE COURSE II: PRINCIPLES OF ECOLOGY

THEORY:

Unit 2: Population ***12**

Population regulation - density-dependent and independent factors Population interactions, Gause's Principle with laboratory and field examples, Lotka-Volterra equation for competition and Predation, functional and numerical responses.

Unit 4: Ecosystem: **4**

Nutrient and biogeochemical cycle with Nitrogen cycle as an example Human modified ecosystem

Course Code: ZC102P
PRINCIPLES OF ECOLOGY

PRACTICALS:

3. Determination of pH, and Dissolved Oxygen content (Winkler's method) and free CO2
4. Report on a visit to National Park/Biodiversity Park/Wild life sanctuary/Reserved forest

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Semester I (Generic) CBCS

GE II:
ANIMAL DIVERSITY

Theory:

Unit 3. Radiata 3
General characters of Cnidarians and polymorphism.

Unit 6. Coelomate Protostomes 3
General characters of Annelida ; Metamerism.

Unit 11. Pisces 4
Osmoregulation, Migration of Fishes

Unit 13. Reptiles 5
Amniotes; Origin of reptiles. Terrestrial adaptations in reptiles.

PRACTICAL:

1. Study of the following specimens:
   Physalia, Tubipora, Metridium, Nereis, Aphrodite, Leech, Petromyzon, Pristis, Hippocampus, Labeo, Draco, Uromastix, Naja, Viper, model of Archaeopteryx.
2. Study of following Permanent Slides: Cross section of Sycon, Sea anemone and Ascaris(male and female). T. S. of Earthworm passing through pharynx, gizzard, and typhlosolar intestine. Bipinnaria and Pluteus larva.

Semester III Zoology Core CBCS

Course Code: ZC305T
CORE COURSE V:
DIVERSITY OF CHORDATA

Theory:

Unit 8: Aves **8**
General characteristics and classification up to order Archaeopteryx-- a connecting link; Principles and aerodynamics of flight, Flight adaptations and Migration in birds.

Unit 10:Zoogeography **8**
Zoogeographical realms, Theories pertaining to distribution of animals, Plate tectonic and Continental drift theory, distribution of vertebrates in different realms.

Practical:

(vii) Mammalia Sorex, Bat (Insectivorous and Frugivorous), Funambulus, Loris, Herpestes, Erinaceous.

5. **Dissection of Fowl head** (Dissections and mounts subject to permission) Power point presentation on study of any two animals from two different classes by students (may be included if dissections not given permission).

Course Code: ZC306T
CORE COURSE VI:
ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS

Theory:
Unit 4: Muscle **12**
Histology of different types of muscle; Ultra structure of skeletal muscle; Molecular and chemical basis of muscle contraction; Characteristics of muscle twitch; Motor unit, summation and tetanus.

Course Code: ZC306P
ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS
Practical:
1. Recording of simple muscle twitch with electrical stimulation (or Virtual)
2. Demonstration of the unconditioned reflex action (Deep tendon reflex such as knee jerk reflex)

Course Code: ZC307T
CORE COURSE VII:
FUNDAMENTALS OF BIOCHEMISTRY
THEORY:
Unit 1: Carbohydrates **8**
Structure and Biological importance: Monosaccharides, Disaccharides, Polysaccharides and Glycoconjugates **Unit 2: Lipids** **8**
Structure and Significance: Physiologically important saturated and unsaturated fatty acids, Tri-acylglycerols, Phospholipids, Glycolipids, Steroids.

Course Code: ZC307P
FUNDAMENTALS OF BIOCHEMISTRY

PRACTICAL:
1. Qualitative tests of functional groups in lipids.
2. Action of salivary amylase under optimum conditions.

GE VII: HUMAN PHYSIOLOGY

SEM III GENERIC

THEORY
(CREDITS 4)
Unit 4: Renal Physiology 8
Functional anatomy of kidney, Mechanism and regulation of urine formation,
Unit 5: Cardiovascular Physiology
10
Structure of heart, Coordination of heartbeat, Cardiac cycle, ECG

PRACTICAL:
3. Estimation of haemoglobin using Sahli's haemoglobinometer

SEMESTER-V **MAJOR**

ZooMT- 501: Genetics and Evolution

Unit-2: Linkage and crossing over; basic knowledge of gene mapping; determination of sex, sex-linked inheritance; cytoplasmic inheritance.

Unit-5: Change in gene frequency (genetic drift, gene flow, genetic load); continental drift; parallel, divergent and convergent evolution; endemism and adaptive radiation

ZooMP- 502: Practical based on ZooMT- 501

2. Study of materials/organisms of evolutionary significance (rocks, fossils and connecting links)

ZooMT- 503: Animal Physiology

Unit-5: Nervous system- neurons, resting membrane potential and its basis, action potential and its propagation in myelinated and non-myelinated nerve fibre; types of synapses and synaptic transmission; neuro-transmitters- their release and action; neuro-muscular junction; types of reflexes; reflex activity; reflex arc; physiology of vision; addictive drugs-types; drug addiction- causes, physiological effects; social implications.

ZooMP- 504: Practical based on ZooMT- 503

1. Qualitative test of salivary amylase.
2. RBC and WBC counting by haemocytometer

ZooMT- 505: Environmental Biology and Wildlife

Unit-4: Environmental pollution (water, air and soil); bioindicators in pollution studies; ecological succession; ecological backlash; greenhouse effect; ozone layer depletion and its impact.

ZooMP- 506: Practical based on ZooMT- 505

2. Study of structural components of an aquatic/ grassland ecosystem
3. Field study: To visit a National park/ Wildlife Sanctuary to study the habitat/ forest types and prepare a full note on it.

ZooMT- 507: Endocrinology

Unit-1: Comparative anatomy of **pancreas** in fish, amphibia, birds and mammals.

Unit-2: Hormones secreted by endocrine glands (**pancreas**) and their functions in mammals.

Unit-4: Roles of hormones in reproductive cycle, pregnancy, parturition and lactation; methods of contraception; amniocentesis and IVF.

ZooMP- 508: Practical based on ZooMT- 507

Histological preparation of thyroid, adrenal, pancreas and gonads

SEMESTER-V **GENERAL**

ZooGT- 501: Genetics and Molecular Biology

Unit-5: Genetic engineering; basic steps in gene cloning; cloning vectors; restriction enzymes

ZooGP- 502: Practical based on ZooGT- 501

1. Ball and stick model for nucleotides

Joyita Bhattacharjee
6:35 PM
Joyita Bhattacharjee, 104
Pallabi Debnath
6:35 PM
Pallabidebnath...66
CHIRANJEEV UPADHYAY
6:35 PM
CHIRANJEEV UPADHYAY ROLL NO- 14
Arindam Hatimuria
6:35 PM
Arindam Hatimuria Roll no: 51
MiktraniMoungkang
6:36 PM
Miktrani Moungkang,42
Indrakshi Dasgupta
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Indrakshi Dasgupta roll no. 58
Seema Chakma
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Seema Chakma Rollno.90

DEPARTMENT OF ZOOLOGY
[COURSE DISTRIBUTION FOR II (CBCS), IV (Non-CBCS) AND VI (Non-CBCS) SEMESTER JANUARY-MAY 2021]

RAJIB RUDRA TARIANG (Head)

Semester II (Honours) CBCS

CCIII – Non-chordates II: Coelomates

UNIT 3: Arthropoda- General characteristics and classification up to classes.Vision & Respiration in Arthropoda, Metamorphosis in Insects, Social life in bees and termites.

CCIII-Practical- Non-Chordates II Coelomates

Unit 1: Study of specimens as per syllabus

Unit 4: Mount of mouth parts and dissection of digestive system and nervous system of *Periplaneta*.

CCIV – : Cell Biology

UNIT -2: Plasma Membrane- Various models in plasma membrane structure, Transport across membranes: Active and Passive transport. Facilitated transport, Cell junctions: Tight junctions, Desmosomes, Gap Junctions.

UNIT – 3: Structure & functions: Endoplasmic Reticulum.

CCIV-Practical: Cell Biology

Unit 1.Preparation of temporary stained of onion root tip to study various stages of mitosis.

Unit 2.Study of various stages of meiosis.

Semester II (Generic) CBCS

CCII-GE-VIIIINSECT VECTORS AND DISEASES

Theory:

Unit I: Introduction to Insects: General Features of Insects, Morphological features, Head – Eyes, Types of antennae, Mouth parts w.r.t. feeding habits.

Unit III: Insects as Vectors: Classification of insects up to orders, detailed features of orders with insects as vectors – Diptera, Siphonaptera, Siphunculata, Hemiptera.

Unit VI: Hempitera as Disease Vectors: Bugs as insect vectors; Blood-sucking bugs; Chagas disease, Bed bugs as mechanical vectors, Control and prevention measures.

Practical:

Unit 1: Study of different kinds of mouth parts of insects.

Unit 2: Submission of a project report on any one of the insect vectors and disease transmitted.

Semester IV Major

Zoo MT- 401: Cell Biology, Histology &Histochemistry

UNIT 1: Structure and functions of plasma membrane (lipid bilayer model). Structure & function of ER, Golgi Bodies.

UNIT 5: Histological structure of muscles, Animal tissues- types and functions lung, stomach, intestine & liver.

ZooMP- 402: Practical based on ZooMT- 401

1. Study of Mitosis in tadpole & onion root tip.

Zoo MT- 403: Developmental Biology

Unit-4: Organogenesis – development of sense organs-Ears.

Unit -5: Extra embryonic membranes in birds and placentation in mammals.

ZooMP- 404: Practical based on ZooMT- 403

UNIT 1: Study of permanent slides of developmental stages in chick embryo

UNIT 3: Submission of permanent stained preparation of (at least two stages up to 72 hrs. development stages) chick embryo.

Zoo MT- 401: Animal physiology and Endocrinology

UNIT 1: Digestion and absorption of carbohydrate

UNIT 4: Anatomy of pituitary & pancreas gland; neuroendocrine system in insects

UNIT 5: Function of pituitary & pancreas gland.

ZooGP- 402: Practical based on ZooGT- 401

Unit 1: Preparation of haemin crystals

Unit 5: Study of histological slides of endocrine glands

Semester VI Major

Zoo MT- 601: Parasitology and Ethology

UNIT 1: Life history, mode of infection and pathogenicity of *Giardia intestinalis*.

UNIT 2: life history, parasitic adaptation and pathogenicity of *Wuchereriabancrofti*

UNIT 3: Vectors of human diseases- Yellow fever, dengue, haemorrhagic fever, filariasis, Japanese B-encephalitis &; measures of control of the vectors.

UNIT 4: Social behavior in insects.

ZooMP- 602: Practical based on ZooMT- 601

UNIT 1: Identification of mosquito species causing malaria, encephalitis and dengue fever

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ZooMT- 603: Molecular Biology and Immunology

Unit-1: Genome organization in prokaryotes and eukaryotes, DNA as genetic material, structure and functions of DNA & RNA; Watson & Crick Model of DNA; other forms of DNA (A & Z).

Unit -5: AIDs

ZooMT- 604: Biotechnology and Bioinformatics

UNIT-1: Industrial biotechnology with special reference to production of alcohol and antibiotics.

UNIT-3: Regulation of biotechnology: production and application of transgenic animals and plants, Genetically modified Organism, their benefits and risk assessment; IPR, patents and ethical issues related to biotechnology.

ZooMP- 605: Practical based on papers ZooMT- 603 and ZooMT- 604

UNIT-1: Determination of blood group and Rh factor

UNIT-4: Immunodiffusion / Blood groping (Ag-Ab reaction)

ZooMT- 606: Economic Zoology

Unit-1: Major insect pests of paddy, tea and stored grains and their biology; Pest management- chemical, cultural and biological; integrated pest management.

ZooMP- 607: Practical based on ZooMT- 606

UNIT 2: Submission of life cycles of eri/ muga/ mulberry silkworms.

UNIT 3: Study of important pests of paddy, tea plants and stored grains and their submission

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DEPARTMENT OF ZOOLOGY
(COURSE DISTRIBUTION FOR II, IV AND VI SEMESTER JANUARY-MAY 2020)

APARAJITA GOGOI (Associate Professor)

Semester II (Honours) CBCS
CCIII – Non-chordates II: Coelomates

UNIT 5: Mollusca- Torsion and detorsion in Gastropoda.
UNIT 6: Echinodermata: General Characteristics and classification upto classes, water vascular system inAsteroidea, Larval forms in Echinodermata, Affinities with Chordates.

CCIII-Practical- Non-Chordates II Coelomates
Unit 1: Study of specimens as per syllabus
Unit 2: Study of digestive system, septalnephridia and pharyngeal nephridia of earthworm.

CCIV –: Cell Biology
UNIT 6: Nucleus-Structure of nucleus: Nuclear envelope, nuclear pore complex, NucleousChromation: Euchromatin and Heterochromatin and Packaging (Nucleosome).
UNIT 8: GPCR and Role of second messenger (cAMP).
CCIV-Practical- Cell Biology:
Unit 2: Study of various stages of meiosis.
Unit 3.Preparation of permanent slide to show the presence of Barr body in human female blood Cells/cheek cells.

Semester II (Generic) CBCS
CCII-GE-VIIIINSECT VECTORS AND DISEASES
Theory:
Unit II: Concept of Vectors: Brief introduction of Carrier and Vectors (mechanical and biological vector), Reservoirs, Host-vector relationship, Vectorial capacity, Adaptations as vectors, Host Specificity.
Unit IV: Siphonaptera as Disease Vectors: Fleas as important insect vectors; Host-specificity, Study of Flea-borne diseases – Plague, Typhus fever; Control of fleas.
Practical:
Unit 2: Study of following insect vectors through permanent slides/ photographs: *Aedes, Culex, Anopheles, Pediculushumanuscapitis, Pediculushumanuscorporis, Phithirus pubis, Xenopsyllacheopis.*
Unit 4:Submission of a project report on any one of the insect vectors and disease transmitted

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Semester IV Major

Zoo MT- 401: Cell Biology, Histology &Histochemistry
UNIT 1: Structure and functions of cell organelles- mitochondria & nucleus.
UNIT 2: DNA packaging in prokaryotes and eukaryotes.
UNIT-4: Basic concept of cell signalling (endocrine, paracrine and autocrinesignalling); second messengers; function of cell surface receptors- G protein-coupled receptors and G-proteins.
UNIT-5: Animal tissues- types and functions- Bone & Kidney.

ZooMP- 402: Practical based on ZooMT- 401
UNIT 3: Histochemical localization of following:
a. General lipid by Sudan black B method.
b. Metachromatic substances by Toluidine blue method.

Zoo MT- 403: Developmental Biology
UNIT 2 : Fertilization- types and mechanism of fertilization; mono and polyspermy; parthenogenesis.
UNIT 3: Fate maps; fate of germ layers.

ZooMP- 404: Practical based on ZooMT- 403
UNIT 1: Study of permanent slides of different embryonic stages of frog/toad

UNIT 3: Submission of permanent stained preparation of (at least two stages up to 72 hrs. development stages) chick embryo.

Semester IV General

Zoo MT- 401: Animal physiology and Endocrinology

Unit –1: Digestion and absorption of proteins and fats.
Unit –2: Blood coagulation
Unit -3: Anatomy of Adrenal Gland
Unit -4 : Function of Adrenal Gland

ZooGP- 402: Practical based on ZooGT- 401

Unit 4: Display pituitary and gonad of fishes.
Unit 5: Study of histological slides of endocrine glands

Semester VI Major

Zoo MT- 601: Parasitology and Ethology

Unit-1: Parasitism; types of parasites, hosts and vectors; parasitic adaptations and effects on hosts; life history and mode of infection and pathogenicity of *Entamoebahistolytica.*
Unit- 2: Life history, parasitic adaptation and pathogenosity of *Fasciola hepatica.*
Unit-5: Different types of orientation and communication in animals; comparative aspects of learning, offensive and defensive behavior.

ZooMP- 602: Practical based on ZooMT- 601

UNIT 2: Study of protozoan parasites (permanent slides)

ZooMT- 603: Molecular Biology and Immunology

Unit-4: Types of immunity; cells and organs involved in immunity; lymphoid organs; antigens, properties of antigens, adjuvant and haptens; antigen-antibody reaction; vaccines and vaccinations.
Unit-5: basic concept of immunodiagnostic techniques (immunodiffusion, RIA and ELISA).

ZooMT- 604: Biotechnology and Bioinformatics

UNIT-2: Introduction of Omics: basic concept of structural and functional genomics. Introduction to proteomics and transcriptomics.
UNIT 4: Fundamentals of bioinformatics: introduction, history and scope of bioinformatics; sources of information, internet world wide web and web browsers; Biological database: introduction, basic concepts of primary and secondary databases.

ZooMP- 605: Practical based on papers ZooMT- 603 and ZooMT- 604

UNIT 2: Preparation and demonstration of ball and stick model of Nucleotides
UNIT 5: Study of Blood Cell types in blood smear slides.
UNIT 8: Similarity search in sequence such as BLAST / FASTA

ZooMT- 606: Economic Zoology

UNIT-4: Principles and practices in aquaculture; fish and prawn culture; preparation and management of different types of ponds for fish culture; induced breeding and hybridization technique in fishes; fish preservation methods; fish by-products.

ZooMP- 607: Practical based on ZooMT- 606

UNIT 4: Identification of economically important fish and prawn available locally.
UNIT 5: Identification of common aquatic weeds, plankton and insects.

Dr. KISHOR HALOI (Asst. Professor)

Semester II (Honours) CBCS
CCIII – Non-chordates II: Coelomates
UNIT -1 Introduction to Coelomates- Evolution of coelom and metamerism.
UNIT- 2 General characteristics and classification up to classes, excretion in Annelida.
UNIT 4: Onychophora- General Characteristics and Evolutionary significance.
CCIII-Practical- Non-Chordates II Coelomates
Unit 1: Study of specimens as per syllabus
Unit 3.Study of T.S. through pharynx, gizzard and typhlosolar intestine of earthworm.

CCIV –: Cell Biology

Semester II (Generic) CBCS
CCII-GE- VIII INSECT VECTORS AND DISEASES
Theory:
Unit IV: Dipteran as Disease Vectors: Dipterans as important insect vectors – Mosquitoes, Sand fly, Houseflies; Study of mosquito-borne diseases – Malaria, Dengue, Chikungunya, Viral encephalitis, Control of mosquitoes.Study of sand fly-borne diseases – Visceral Leishmaniasis, Cutaneous Leishmaniasis, Phlebotomus fever; Control of Sand fly.
Practical:
Unit 2: Study of following insect vectors through permanent slides/ photographs: *Cimexlectularius, Phlebotomusargentipes, Muscadomestica,* through permanent slides/ photographs.
Unit 4: Submission of a project report on any one of the insect vectors and disease transmitted.

Semester IV Major

Zoo MT- 401: Cell Biology, Histology &Histochemistry
UNIT 1: Structure and functions of cell organelles- lysosome, ribosome; receptor mediated endocytosis.
UNIT 3: Cell cycle- molecular events in different phases, regulation of cell cycle; normal and malignant cell growth; cell division (mitosis and meiosis); programmed cell death (apoptosis)
Unit–5: Histological methods- basic principles of fixation, dehydration, embedding, sectioning and spreading; types of staining; vital staining; classification and properties of dyes; metachromatic dyes and staining.

ZooMP- 402: Practical based on ZooMT- 401
UNIT-4: Histological preparation of liver, stomach, intestine, kidney, pancreas, testes and ovary of vertebrates and submission of slides

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Zoo MT- 403: Developmental Biology
Unit-1: Gametogenesis- formation of gametes (spermatogenesis; oogenesis); structure, maturation and growth of sperm and ovum; vitellogenesis.
Unit-4: Organogenesis – development of sense organs-Eyes.

ZooMP- 404: Practical based on ZooMT- 403
UNIT 1: Study of permanent slides of developmental stages in chick embryo
UNIT 3: Submission of permanent stained preparation of (at least two stages up to 72 hrs. development stages) chick embryo.

Semester IV General

Zoo MT- 401: Animal physiology and Endocrinology
Unit –1: Balanced diet.
Unit –2: Physiology of respiration and excretion in mammals.
Unit –4: A brief outline of the organization of endocrine system in mammals.

ZooGP- 402: Practical based on ZooGT- 401

Unit—3 : Counting of WBC/RBC (haemocytometer)
Unit 5: Study of histological slides of endocrine glands

Semester VI Major

Zoo MT- 601: Parasitology and Ethology

UNIT 1: Life history and mode of infection and pathogenicity of *Trypanosoma*spp., *Leishmania Donovanii*

UNIT 2: General organizations and pathogenosity of bacteria & viruses (*Rickettsia, Borrelia, Treponema*&*Leptospira*)

UNIT 3: Introduction to animal behaviour; brief history of ethology; patterns of behavior.

ZooMP- 602: Practical based on ZooMT- 601

UNIT 3: Study of geotactic, phototactic, chemotactic and sociotacticbehaviour of earthworm, cockroach, *Paramecium* and fish.

ZooMT- 603: Molecular Biology and Immunology

UNIT 2: Replication and transcriptions; genetic code; Wobble hypothesis; protein biosynthesis in prokaryotes.

UNIT-3: Recombination in prokaryotes; transformation, conjugation and transduction.

UNIT-5: Immunoglobulin: basic structure, classes and functions**.**

ZooMT- 604: Biotechnology and Bioinformatics

UNIT-1:Basic principles of recombinant DNA technology, cutting, joining and visualization of DNA fragments, cloning vectors and gene cloning; application of DNA technology in agriculture and health.

UNIT-4: Nucleic acid and protein sequence database (NCBI, gene bank and SWISS- PROT); Data mining and data mining tools (ENTREZ).

UNIT-5:Database search and sequence alignment. Tools of sequence alignment – FASTA and BLAST.

ZooMP- 605: Practical based on papers ZooMT- 603 and ZooMT- 604

UNIT 3: Detection / estimation of RNA

UNIT 6: Histological study of Lymphoid organs.

ZooMT- 606: Economic Zoology

UNIT-2: Life histories of silkworm (eri, muga and mulberry); culture technique of silkworms; diseases of silkworms and its prevention

UNIT-3: Life history of honey bee (*Apisindia*); rearing techniques of honeybee; Biology and culture of lac insect.

ZooMP- 607: Practical based on ZooMT- 606

UNIT 1: Identification of silkworms (eri, muga& mulberry), immature and adult stages

UNIT 8 Analysis of nutrients (Carbohydrate, Protein and Lipid) of Honey.

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DEPARTMENT OF ZOOLOGY
(COURSE DISTRIBUTION FOR II, IV AND VI SEMESTER JANUARY-MAY 2020)

Dr. MONI KANKANA KALITA (Asst. Professor)

Semester II (Honours) CBCS
CCIII – Non-chordates II: Coelomates
UNIT – 5: Mollusca: General Characteristics and classification upto classes. Respiration in Mollusca, Pearl formation in bivalves, evolutionary significance of trochophore larva.
CCIII-Practical- Non-Chordates II Coelomates
Unit 1: Study of specimens as per syllabus
Unit 5: To submit a Project Report on any related topic to larval forms (Crustacean, mollusca and echinodermata)

CCIV –: Cell Biology
UNIT-1: Prokayotic and Eukaryotic cells, Virus, Viroids, Mycoplasma, Prions.
UNIT-2: Mitosis, Cell Cycle and its regulation.
UNIT – 3: Structure & functions: Golgi Bodies and Lysosomes.

CCIV – Practical: Cell Biology
Unit-4 Preparation of permanent slide to demonstrate:
a. Mucopolysaccharides by PAS reaction
b. Proteins by Mercurobromophenol blue/ Fast Green.

Semester II (Generic) CBCS
CCII-GE- VIII INSECT VECTORS AND DISEASES
Theory:
Unit IV: Dipteran as Disease Vectors: Study of house fly as important mechanical vector, Myiasis, Control of house fly.
Unit V: Siphunculata as Disease Vectors: Human louse (Head, Body and Pubic louse) as important insect vectors; Study of louse-borne diseases –Typhus fever, Relapsing fever, Trench fever, Control of human louse.
Practical:
Unit 3: Study of different diseases transmitted by the insect vectors, as mentioned in the syllabus. (*Aedes, Culex, Anopheles, Pediculushumanuscapitis, Pediculushumanuscorporis, Phithirus pubis, Xenopsyllacheopis, Cimexlectularius, Phlebotomusargentipes, Muscadomestica*).
Unit 4: 4. Submission of a project report on any one of the insect vectors and disease transmitted.

Semester IV Major

Zoo MT- 401: Cell Biology, Histology &Histochemistry
UNIT 1: Overview of prokaryotic and eukaryotic cells, extra cellular matrix. Structure and functions of chromosome; polytene and lamp brush chromosomes. chromatin- molecular organization, nucleosome.
UNIT 2: Heterochromatin and euchromatin; models of chromosomal movements
UNIT 5: Animal tissues- types and functions – Epithelium

ZooMP- 402: Practical based on ZooMT- 401
UNIT 2: Meiosis in testes of grasshopper and cockroach.

Zoo MT- 403: Developmental Biology
Unit-3: Cleavage and gastrulation- cleavage pattern, blastulation and gastrulation in chick. primary organisers, induction, property and mechanism of action of inductive substances.

ZooMP- 404: Practical based on ZooMT- 403

UNIT 1: Study of permanent slides of different embryonic stages of frog/toad
UNIT 3: Submission of permanent stained preparation of (at least two stages up to 72 hrs. development stages) chick embryo.

Semester IV General

Zoo MT- 401: Animal physiology and Endocrinology
Unit –2: Composition and constituents of blood groups and Rh factor.
Unit –3: Neurons and conduction of nerve impulse; drug addiction and its impact on society.
Uniu-4: Anatomy of Thyroid Gland
Unit –5: General character of hormones, feedback mechanism. Function of Thyroid Gland.

ZooGP- 402: Practical based on ZooGT- 401
Unit 3 : Blood group determination
Unit 5: Study of histological slides of endocrine glands

Semester VI Major

Zoo MT- 601: Parasitology and Ethology
UNIT 1: Life history and mode of infection and pathogenicity of *Trichomonasvaginalis& Plasmodium.*
UNIT 2: life history, parasitic adaptation and pathogenicity of *Taeniasolium, Ancylostoma duodenale.*
UNIT 4: Sense organs and behaviour; genetical and ecological aspects of behavior.

ZooMP- 602: Practical based on ZooMT- 601
UNIT 4: Study of habituation in mosquito larvae

ZooMT- 603: Molecular Biology and Immunology
UNIT 3: Concept of transposons and plasmids; regulation of gene expression in prokaryotes, operon concept (Lac operon).
UNIT 5: Clonal selection theory; polyclonal and monoclonal antibodies; major histocompatibility complex- structure and functions; immune system in health and disease.

ZooMT- 604: Biotechnology and Bioinformatics
UNIT-1: Introduction, history and scope, basic knowledge of genetic engineering, protoplast fusion and somatic hybridization technique.
UNIT-2: DNA sequencing, Human genome project.
UNIT-3: Methods of sequence alignment; phylogenetic analysis: basic concept, steps in evaluation of phylogeny and constructing phylogenetic trees.

ZooMP- 605: Practical based on papers ZooMT- 603 and ZooMT- 604
UNIT 7: Different e-resources and database search
UNIT 9: Creation of databases.

ZooMT- 606: Economic Zoology
UNIT-5: Piggery: management and practices of pig rearing; poultry: selection of breed (chicken and duck) and their scientific rearing methods; poultry diseases and its prevention/control.

ZooMP- 607: Practical based on ZooMT- 606
UNIT 6: Demonstration of induced breeding in fish.
UNIT 7: Apiculture- culture of honey bee and extraction of honey.
