



2.3.2

ICT enabled tools

For effective teaching learning engagement

Third Cycle NAAC Accreditation

Submitted



**THE NATIONAL ASSESSMENT AND
ACCREDITATION COUNCIL**

SSR – 2022, Digboi College, Digboi

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Section - A

Statistics of Usage of ICT tools

Statistics of ICT tools used by Faculty members

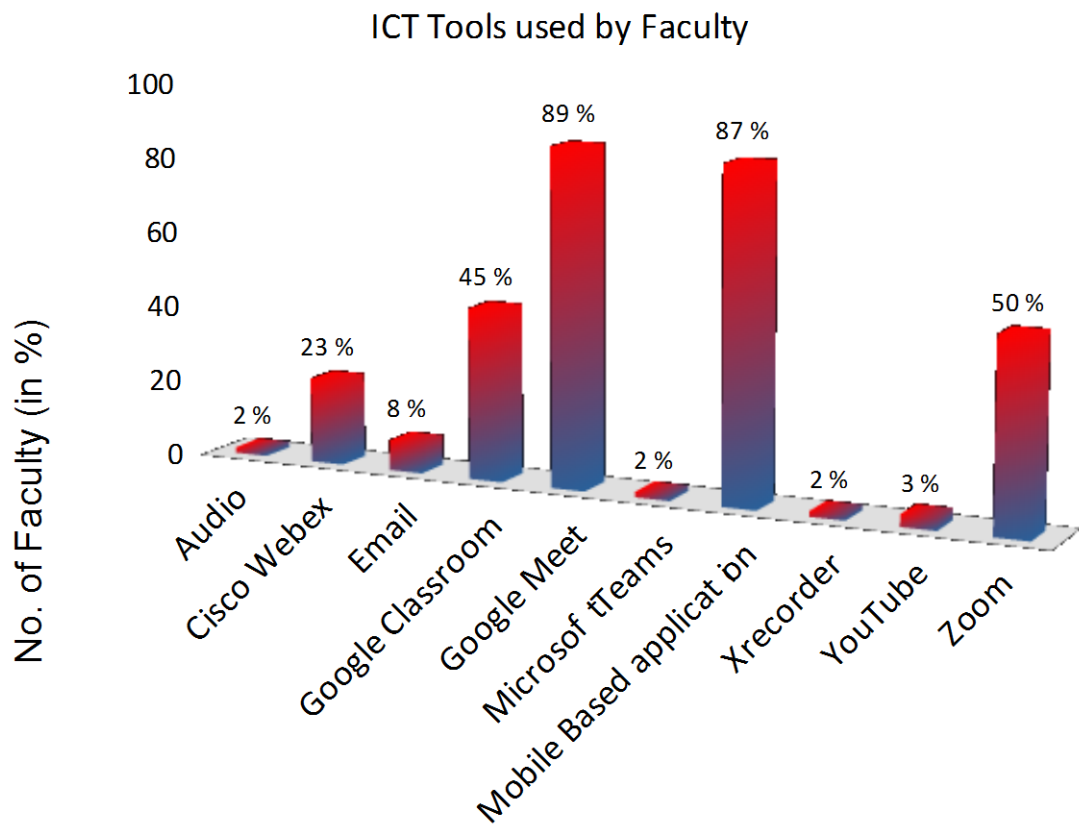


Figure representing number of faculties in percentage using ICT tools for Teaching-Learning process

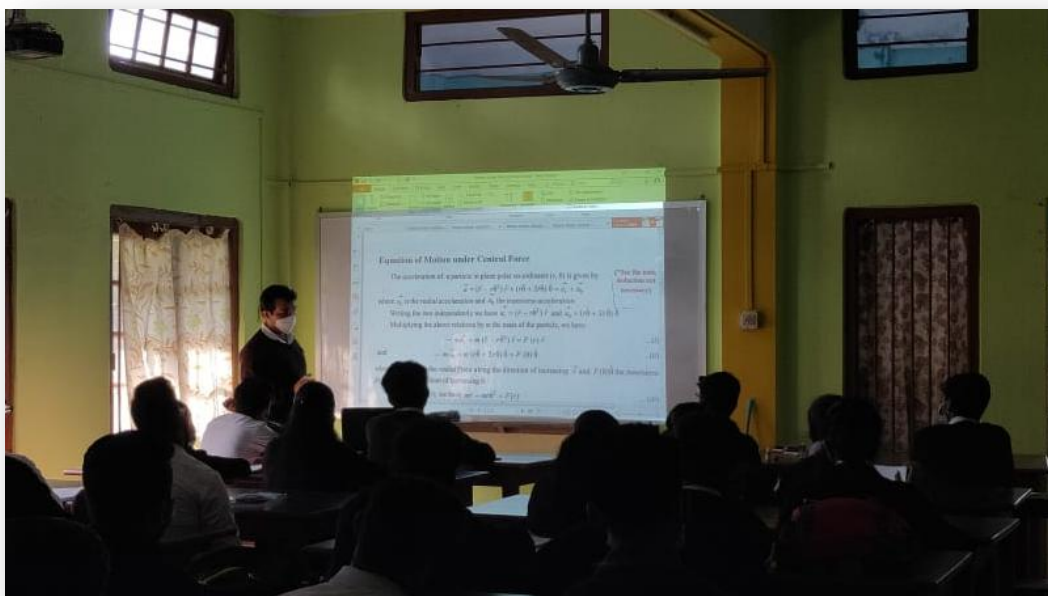
Section - B

PowerPoint Presentations

Part - I

PowerPoint Presentations by Faculties

Glimpses of Faculties using PowerPoint Presentations for effective Teaching-Learning Process



Glimpses of Faculties using PowerPoint Presentations for effective Teaching-Learning Process



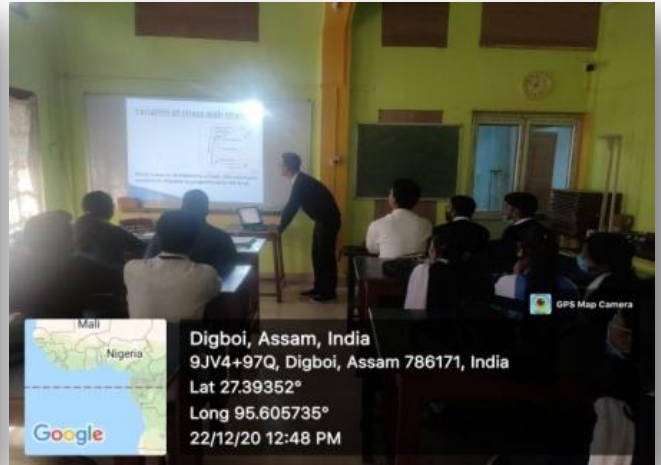
Glimpses of Faculties using PowerPoint Presentations for effective Teaching-Learning Process



Part - II

PowerPoint Presentations by Students

Glimpses of students delivering PowerPoint presentations

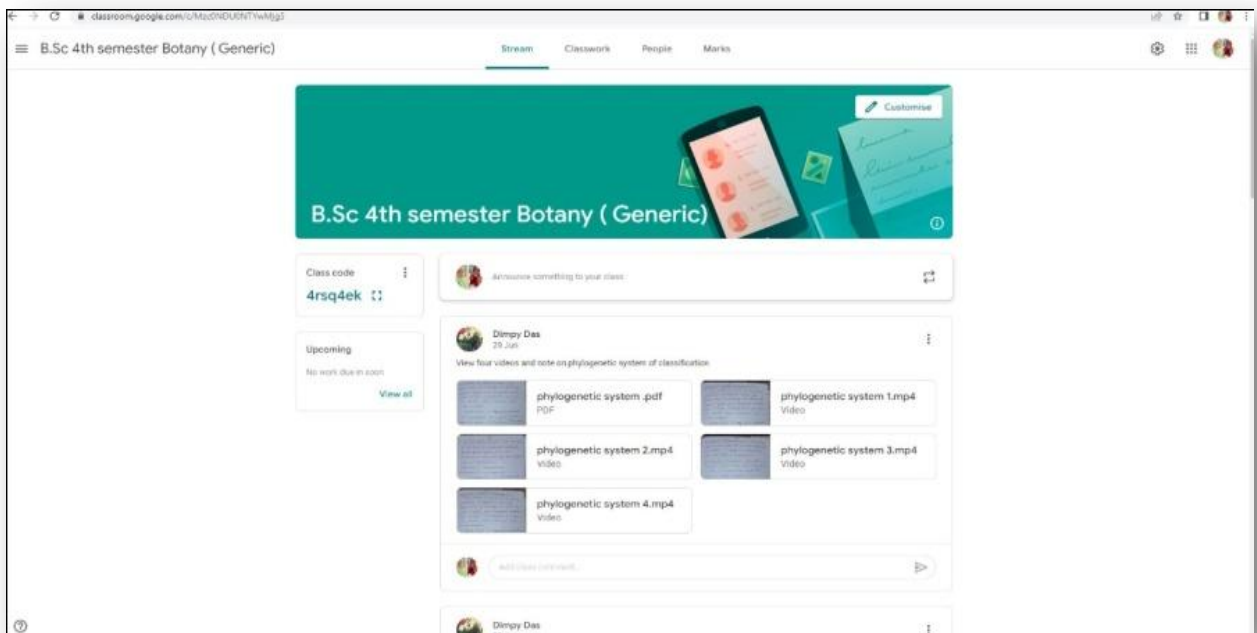
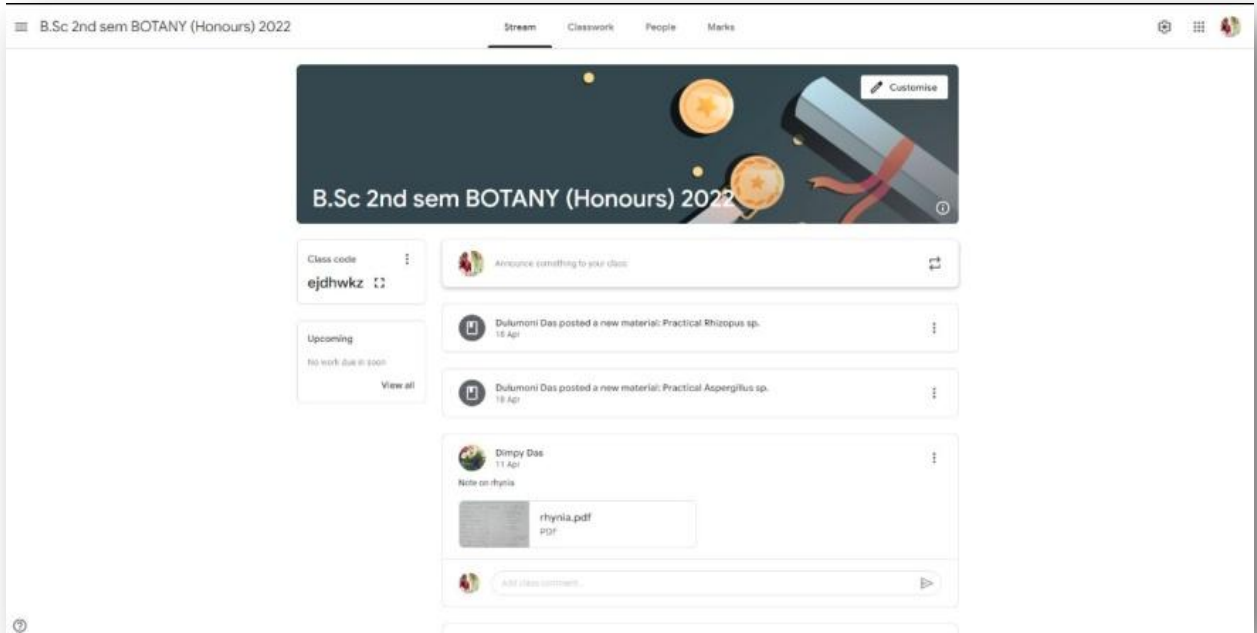


Section - C

Google Classroom

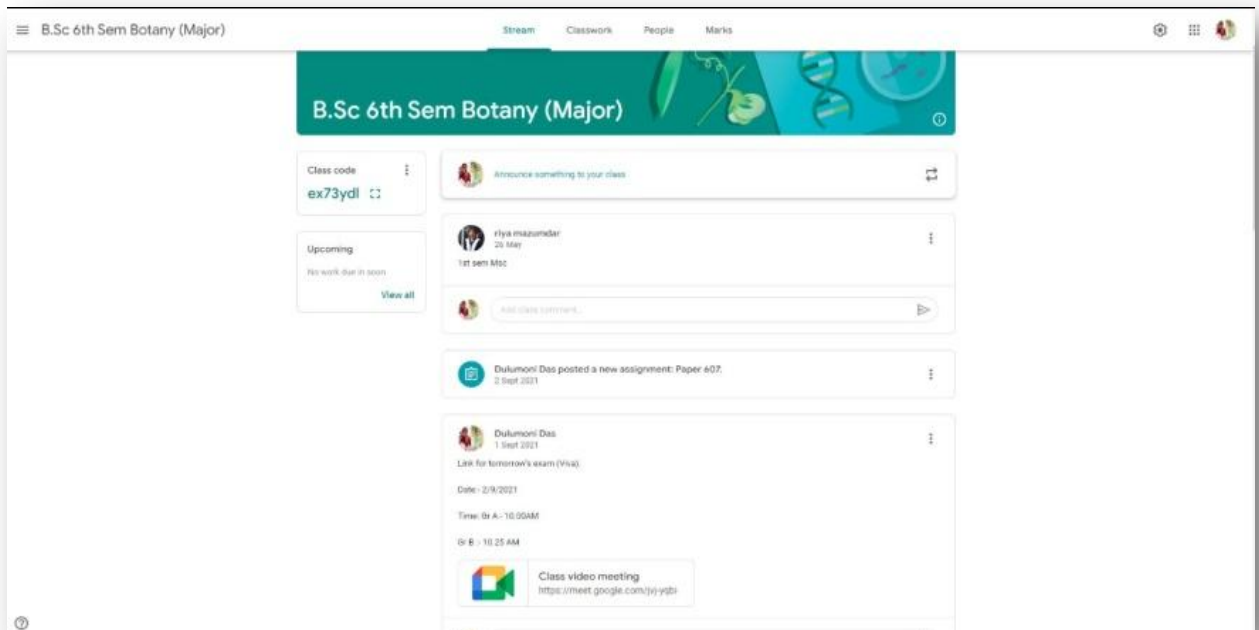
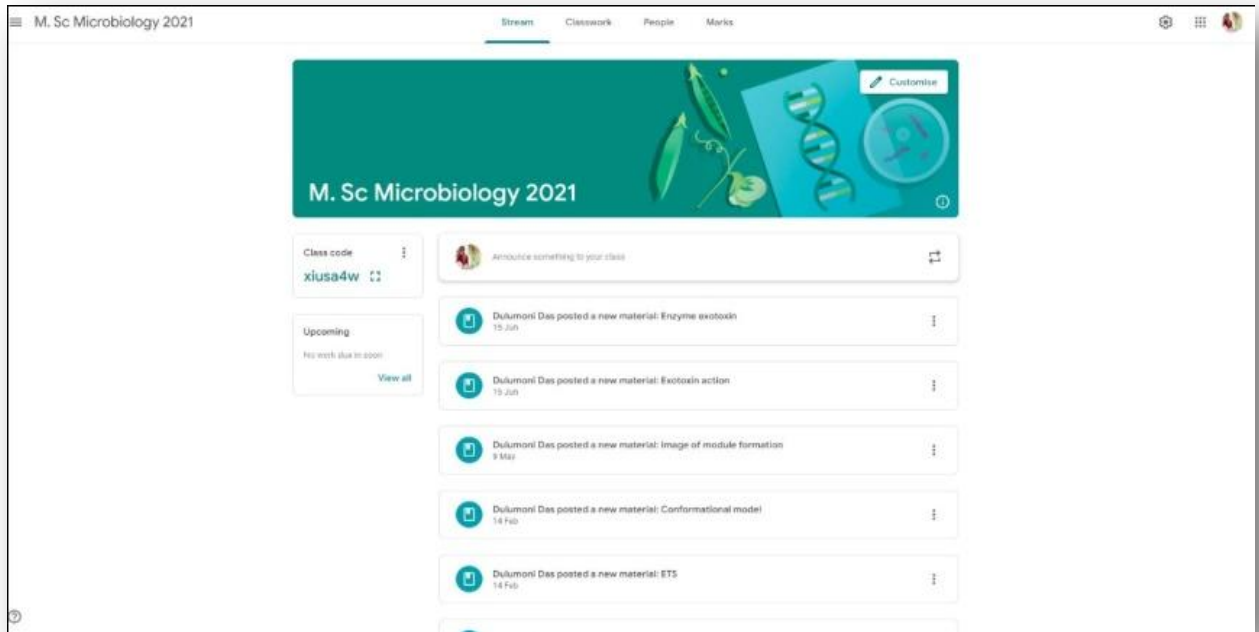
Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Botany



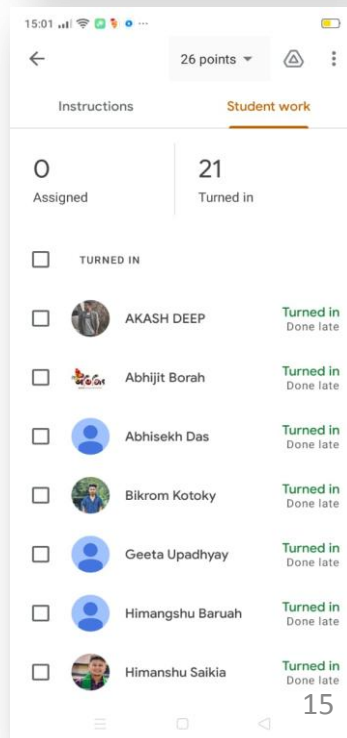
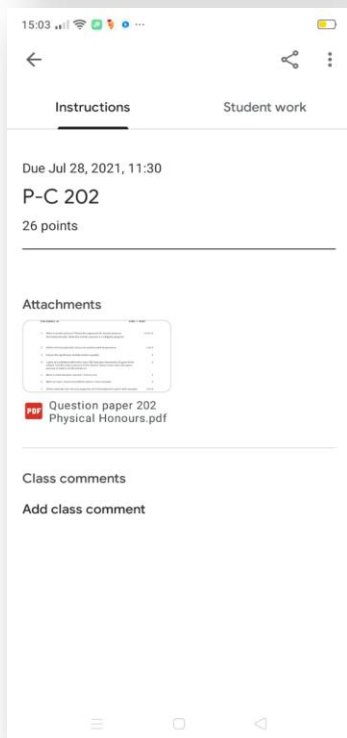
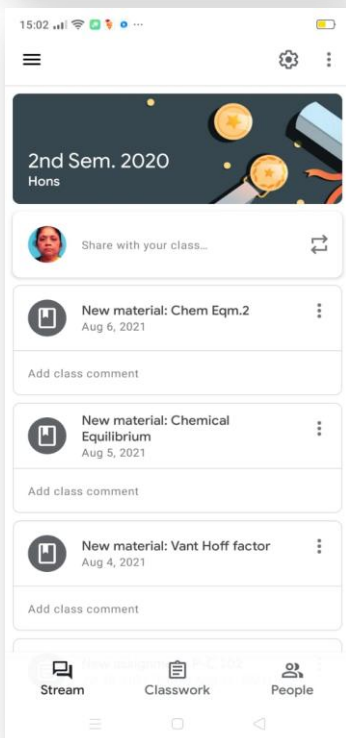
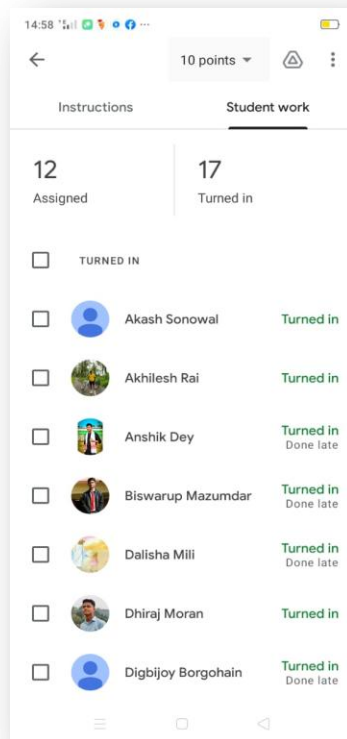
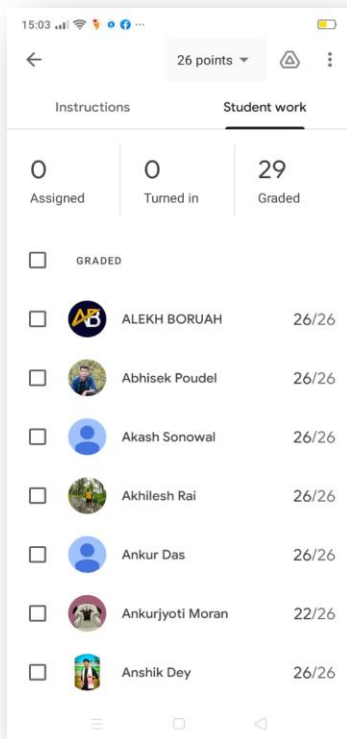
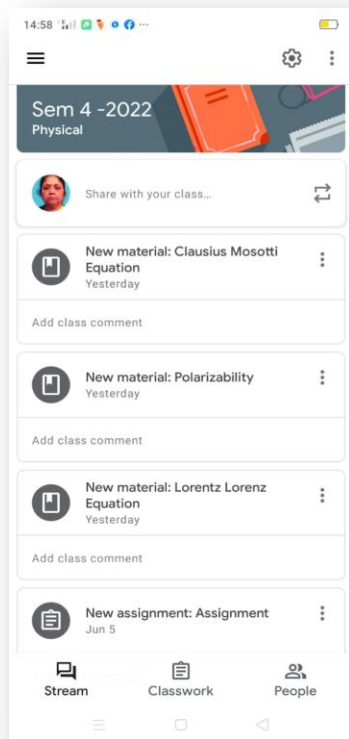
Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Botany



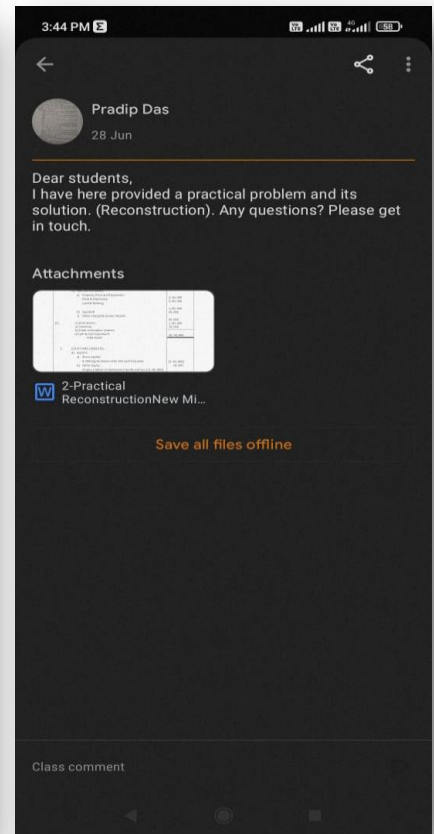
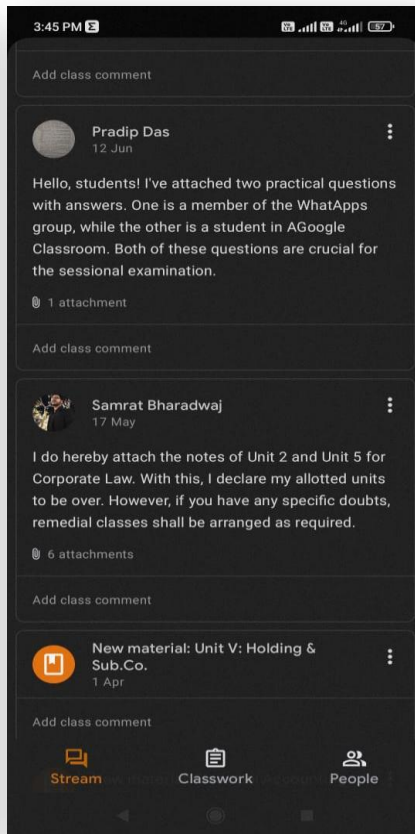
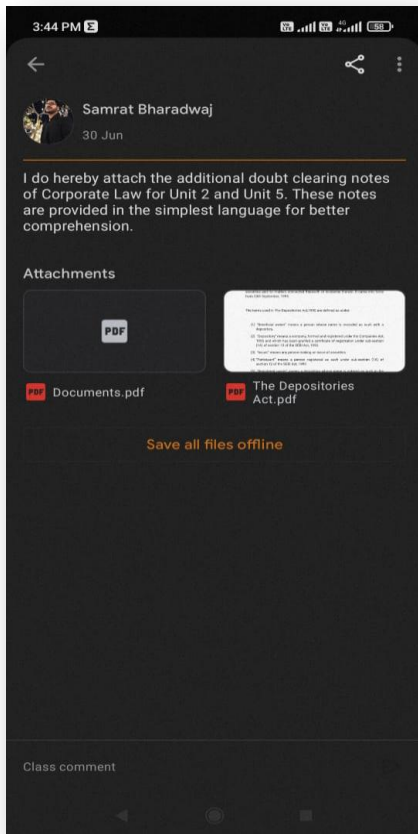
Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Chemistry



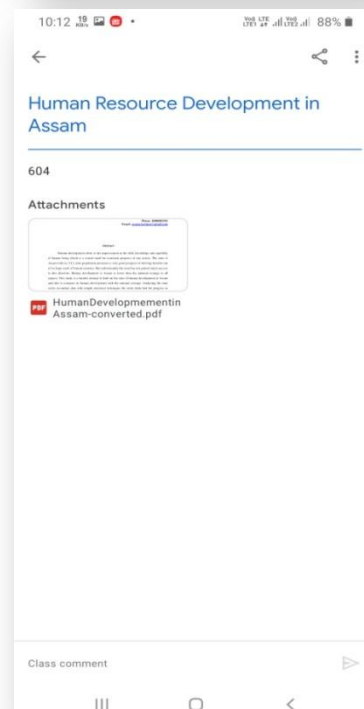
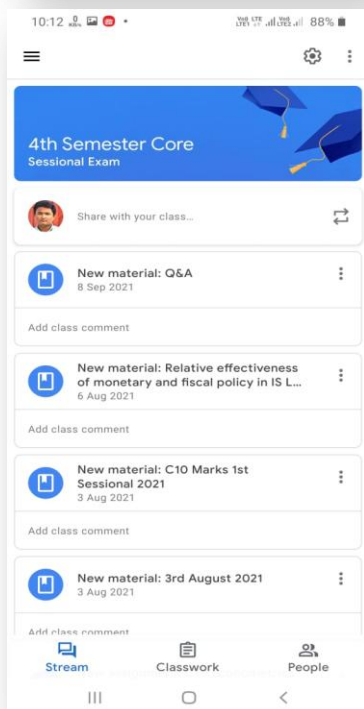
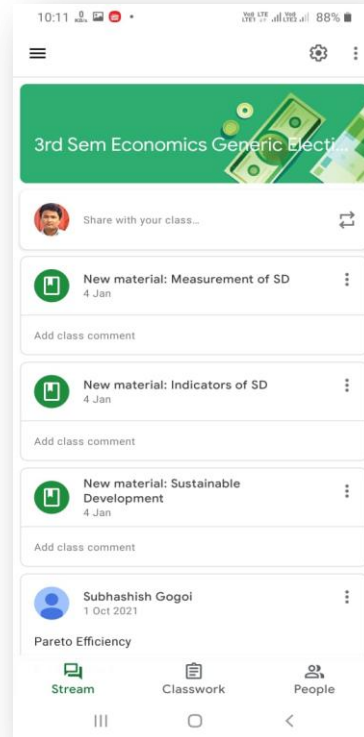
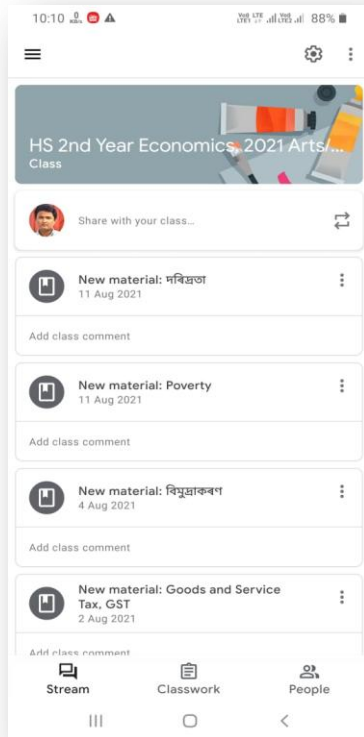
Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Commerce



Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Economics



Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of English

The screenshot shows the Google Classroom interface for 'Sem 2(2021) English Honours'. The 'Stream' tab is active. Two posts by Pabitra Bharali are visible, both dated July 1, 2021. The first post includes a video titled 'Rushdie's The Free Radio L...' (42 minutes) with the text 'Here's the recording of the second lecture on Rushdie's short story The Free Radio.' The second post includes a video titled 'Rushdie's The Free Radio L...' (56 minutes) with the text 'Here's the recording of the first lecture on Rushdie's short story The Free Radio.' Both posts have a comment box below them.

The screenshot shows the Google Classroom interface for 'Sem 2(2021) English Honours'. The 'Stream' tab is active. Two posts by Pabitra Bharali are visible. The first post, dated June 24, 2021, includes a PowerPoint titled 'SHASHI DESPANDE.The Int...' with the text 'Here's a ppt on Shashi Deshpande's short story The Intrusion. I hope you will be benefitted from it.' Below this post, there are 2 class comments, with one from Priya Dey dated June 25, 2021, saying 'thankyou sir'. The second post, dated May 26, 2021 (Edited May 26, 2021), includes a Word document titled 'Mulk Raj Anand.docx' with the text 'Dear students, Please go through the text of Mulk Raj Anand's story The Two Lady Rams. Try to find out answers to the following queries before we go for the analysis of the story:'.

Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

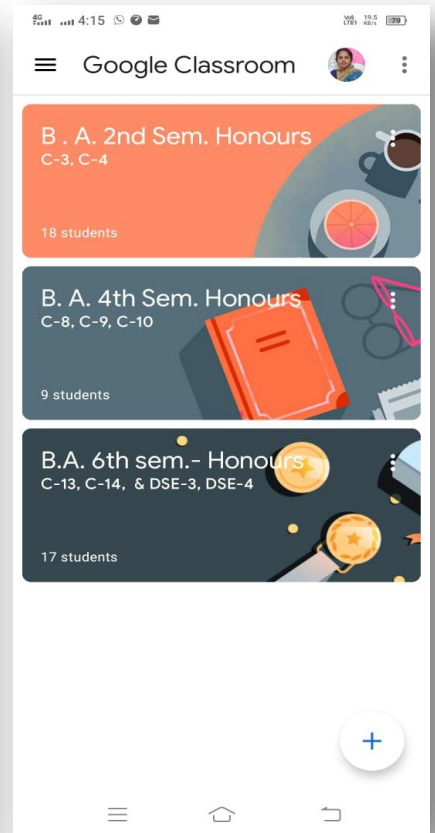
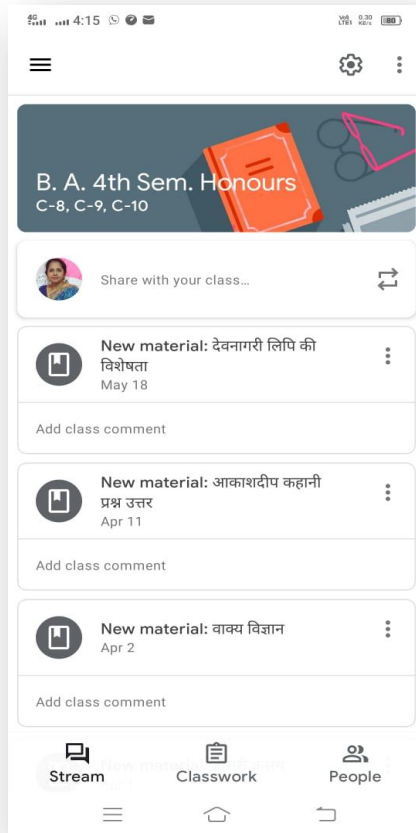
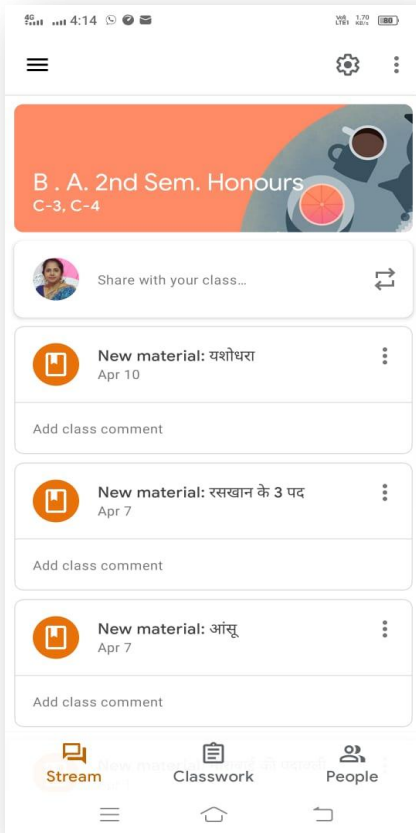
Department of English

The screenshot shows the Google Classroom interface for a class titled "3rd Sem English Honours 2021-22". The main heading is "2nd Sem Home Assignment, 2021". Below this, there is a card for "Home Assignment, 2021: C3" with a due date of "Due Aug 5, 2021". The card indicates that the assignment was posted on Jul 29, 2021, and edited on the same date. The instructions state: "Dear students, You are required to submit Home Assignment on two topics. Write them as standard essays by including three sections- Introduction, Analysis and Conclusion. Word Limit 800." The card also shows "37 Turned in" and "18 Assigned". A link to "Home Assignment, 2021: ... Google Docs" is provided. At the bottom of the card, there is a "View assignment" link. The interface also shows a "2nd Sem Sessional, 2021" section with a card for "Sessional 2021: C4 (Reassigned)" edited on Aug 24, 2021. The bottom of the screen shows a Windows taskbar with various application icons and system information like "28°C Partly cloudy" and "07:58 AM 05/07/2022".

The screenshot shows the Google Classroom interface for a class titled "Sem 3 (2021), Sem -I (2020), English Honours". The main heading is "Literature -An Introduction" with a due date of "Due Sep 9, 2020, 11:59 PM". The assignment was posted on Sep 8, 2020, and edited on Sep 10, 2020. The instructions state: "Please find answers to these questions to have basic understanding of literature. Test your knowledge of Implications of the term literature." The assignment is worth "A+ • 50 points". There are two links to Google Forms: "1st Sem Honours: Literature ..." and "https://forms.gle/YwKKHwNoJhVfI". Below the assignment, there is a section for "1 class comment" by Pabitra Bharali on Sep 10, 2020. The comment reads: "All students have not participated in the quiz. It pains me to know this. These are preparations for the great venture you have launched into. Do not leave any chance to TEST YOURSELF and UPGRADE YOURSELF!". At the bottom, there is a text input field for "Add class comment..." with a "Post" button. The bottom of the screen shows a Windows taskbar with various application icons and system information like "28°C Partly cloudy" and "08:24 AM 05/07/2022".

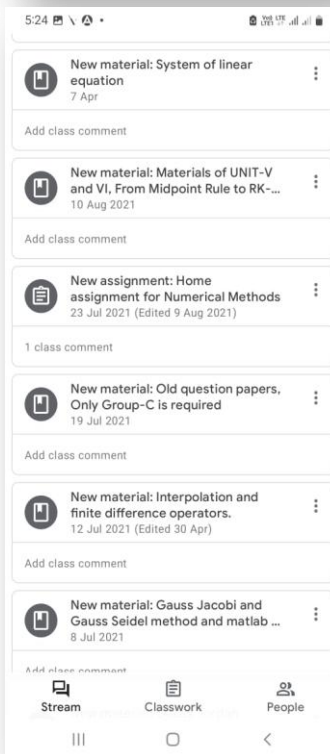
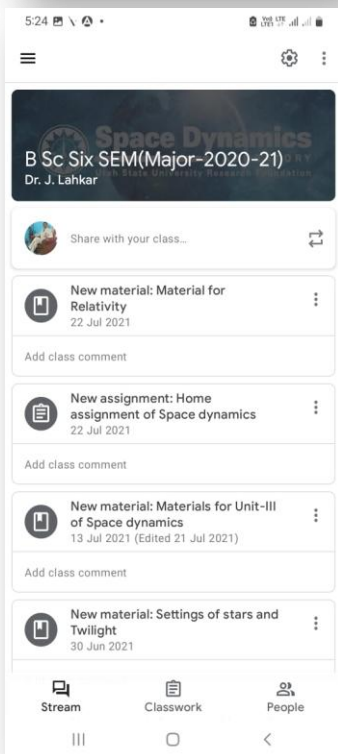
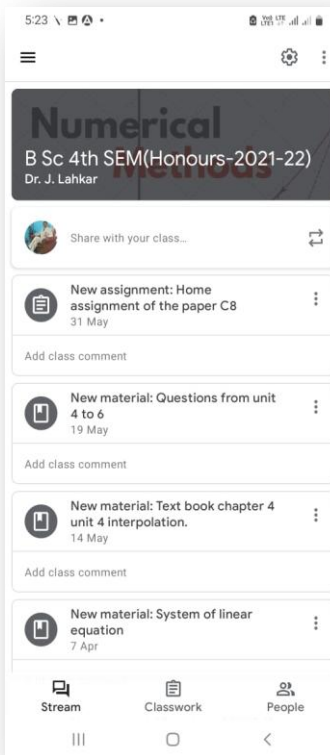
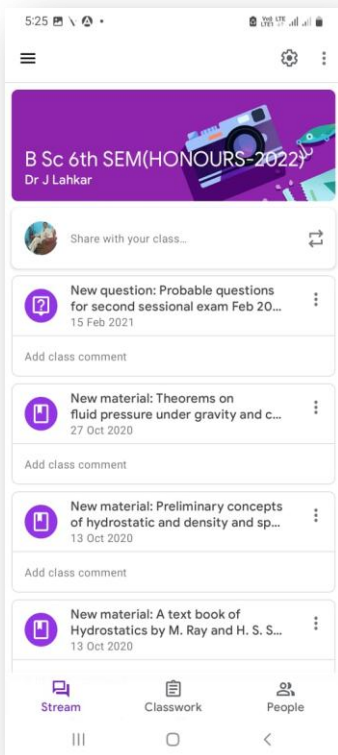
Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Hindi



Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Mathematics



Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Physics

The screenshot shows the Google Classroom interface for the course "SEM-II PHY_HONS_2022". The "Student work" tab is active, displaying a list of students on the left and a grid of submission thumbnails on the right. The assignment is titled "C-3 Assignment (DKK)".

Left Panel (Students):

Student	Status
All students	
Sort by status	
Turned in	
Giteema Kishan	Turned in
Himani Gurung 'Roll no - 44'	Turned in
Kabita Sonar	Turned in
Koushik Karmakar	Turned in
Nishi Sonowal	Turned in

Right Panel (Submissions):

15 Turned in, 14 Assigned

All

Student	Submission	Status
Giteema Kishan	Scanned_20220604-1...	Turned in
Himani Gurung	Magnetic properties.p...	Turned in
Kabita Sonar	4 attachments	Turned in
Koushik Karmakar	koushik karmakar/174	Turned in
Nishi Sonowal	C3 assignment.pdf	Turned in
nortu hemant	C3 Assignment.pdf	Turned in
Pari Gogoi	C3 Assignment.pdf	Turned in
Prakash Mandal	C3 assignment.pdf	Turned in

Monday, July 04, 2022

The screenshot shows the Google Classroom interface for the course "SEM-VI (CBCS) 2022". The "Student work" tab is active, displaying a list of students on the left and a grid of submission thumbnails on the right.

Left Panel (Students):

Student	Status
All students	
Sort by status	
Turned in	
Abhijit Buragohain	100 Done late
abhilekh dutta	100 Done late
Am Kumar Chetry	100 Done late
Anmol Kumar Sah	100 Done late
Bhaskar Bora	100 Done late

Right Panel (Submissions):

20 Turned in, 5 Assigned

All

Student	Submission	Status
Abhijit Buragohain	Rollno41 Abhijit burag...	Turned in late
abhilekh dutta	3_25_Abhilekh_Dutta...	Turned in
Am Kumar Chetry	M-Kumar Assignment...	Turned in late
Anmol Kumar Sah	Roll no-35 Anmol ku...	Turned in
Bhaskar Bora	3_78_B.Sc 5th Sem_B...	Turned in late
Bimal Ghimire	DocScanner Apr 21, 2...	Turned in
Bishal Das	2 attachments	Turned in
Bobita mittal	3_24_6th semester_B...	Turned in

Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Physics

Sem-III (GENERIC) CBCS -2021

Instructions Student work

Return 30 points

All students

Sort by status

Turned in

Aaryan Chhetri 30 Done late

Abhisek Poudel 30

Abhishek Chetry 30

Ankurjyoti Moran 30

Barsha Rani Sonowal 30

Physics GE3: Thermal Physics and Statistical Mechanics

20 6

Turned in Assigned

All

Aaryan Chhetri (02)(G... Turned in late

Abhisek Poudel BSC 3rd SEMESTER-0... Turned in

Abhishek Chetry DocScanner Jan 27, 2... Turned in

Ankurjyoti Moran GE-3 roll no 38.pdf Turned in

Barsha Rani Sonowal

Bishal Bhattarai

Dhiraj Moran

Drishti Sharma

PG-2_2022

Instructions Student work

Return 50 points

All students

Sort by status

Turned in

Abhinandan Sah 50 Done late

Aunkita Kundu 50 Done late

Kunal Upadhyay 50 Done late

Prajwal Prasad 50 Done late

Saswata Roy Purkayastha 50 Done late

Assignment No:1 (Definition of Plasma)

7 0

Turned in Assigned

All

Abhinandan Sah Abhinandan (Plasma ... Turned in late

Aunkita Kundu plasma assignment.pdf Turned in late

Kunal Upadhyay Physics Assignment.p... Turned in late

Prajwal Prasad Assignment of plasm... Turned in late

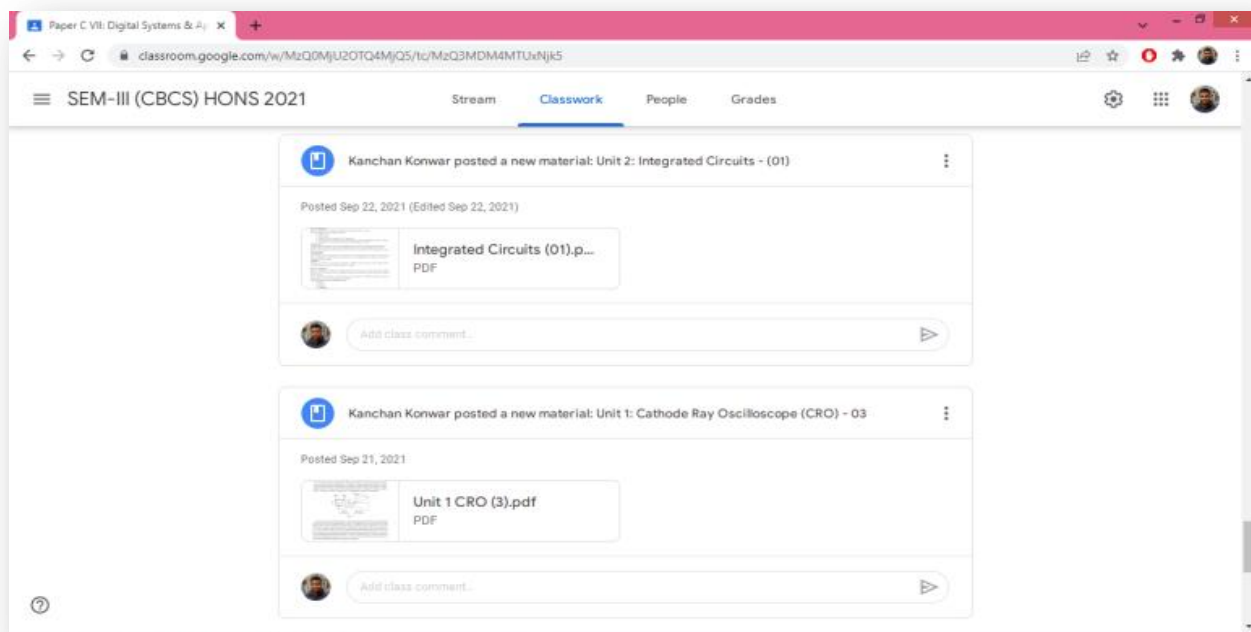
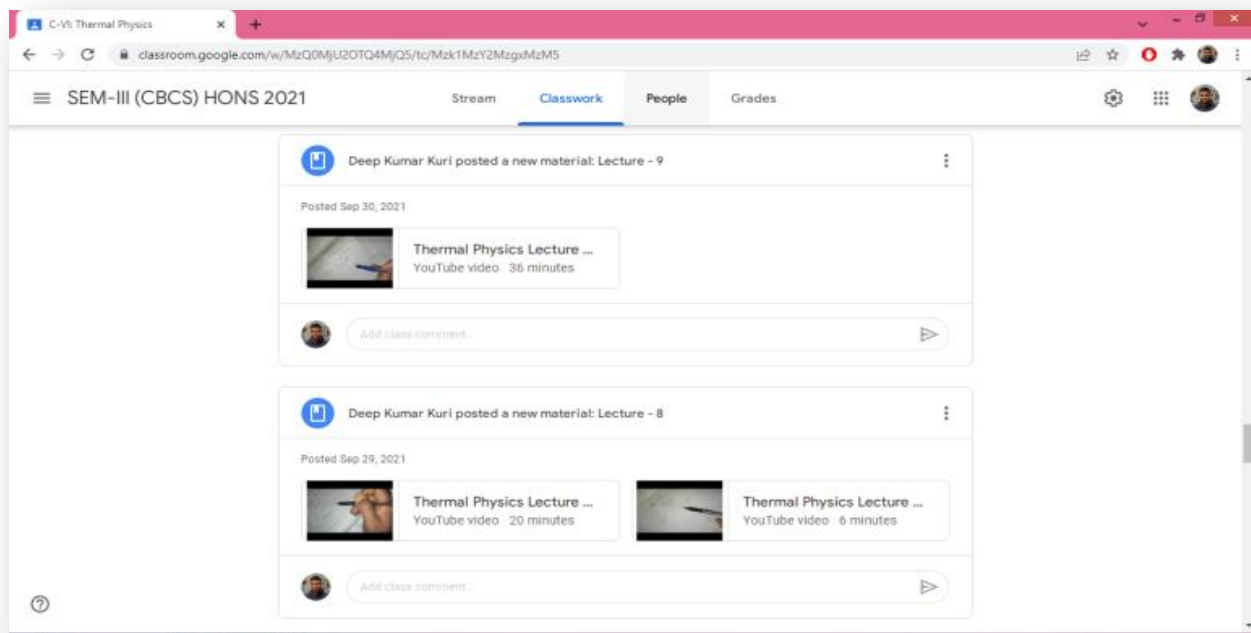
Saswata Roy Purkayastha

Saurav Bardhan

Shyam Sundar Borah

Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Physics



Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Rural Development

The screenshot shows a Google Classroom interface for a course titled 'B.A. 3rd Sem CBCS(20-22)'. The assignment is 'PROJECT SUBMISSION' with a value of 5 points. The interface is divided into three main sections: a left sidebar, a top header, and a main content area.

Left Sidebar: Contains a list of students under the heading 'All students'. The list includes: Arindam BuraGohain -26, Dikhamoni Gohain, EASHA SHARMA - 91, Parinita Gogoi, Shantoni Gohain, and Suman Yadav. Each student's name is followed by a score of 5/5.

Top Header: Displays the course name 'B.A. 3rd Sem CBCS(20-22)', the assignment title 'PROJECT SUBMISSION', and the point value '5 points'. There are also buttons for 'Return' and 'Open Kami Grader'.

Main Content Area: Shows a grid of student submissions. The grid is organized into two columns: 'Turned in' (6 submissions) and 'Assigned' (57 submissions). The 'Turned in' column shows submissions from Arindam BuraGohain -26, Dikhamoni Gohain, EASHA SHARMA - 91, Parinita Gogoi, Shantoni Gohain, and Suman Yadav. The 'Assigned' column shows submissions from Dikhamoni Gohain, EASHA SHARMA - 91, Parinita Gogoi, Shantoni Gohain, Suman Yadav, Abhijit konwar, Anisha Siris, Ankita Debnath, and Antarikhya Kalita. Some submissions are marked as 'Missing'.

The screenshot shows a Google Classroom interface for a course titled 'B.A. 1st SEM CBCS(21-23)'. The assignment is 'HOME ASSIGNMENT : What are the main causes of rural backwardness?' with a value of 10 points. The interface is divided into three main sections: a left sidebar, a top header, and a main content area.

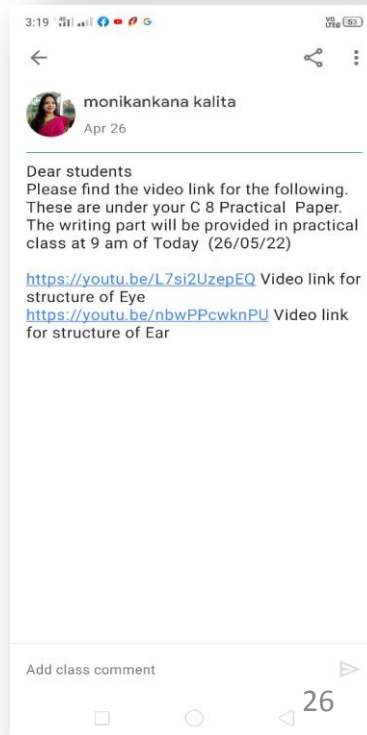
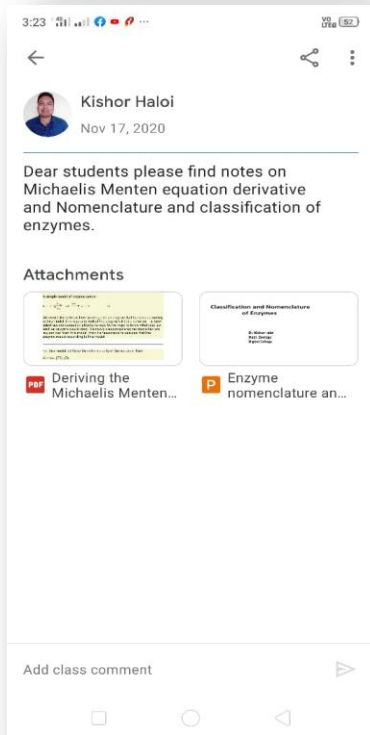
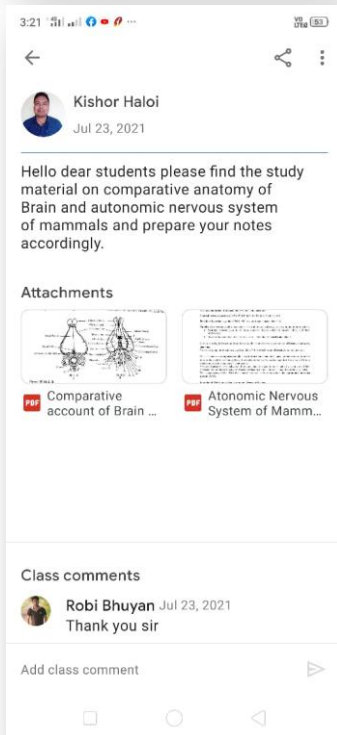
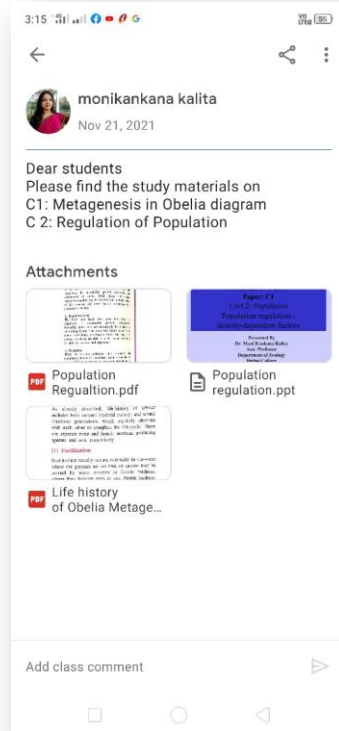
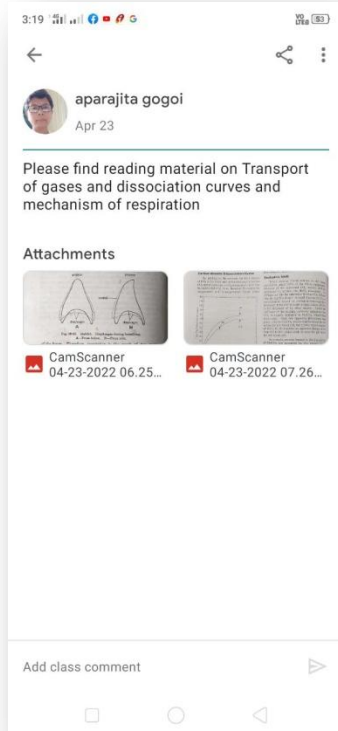
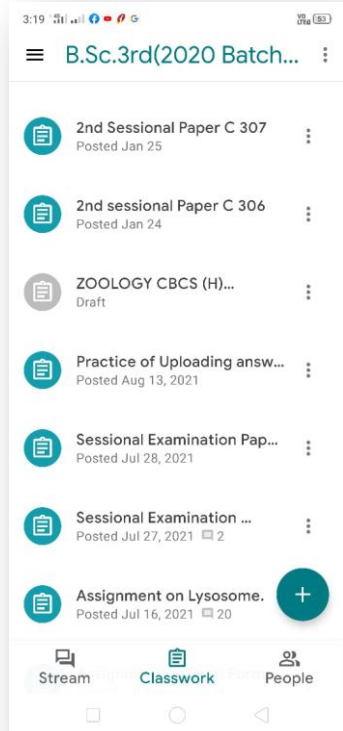
Left Sidebar: Contains a list of students under the heading 'All students'. The list includes: 7 SEvEn, Anannya Saikia, Ananya Chetia pator, Anjali Chetry, Anjita Sarmah, Anjoli Chetry, and Ankita Chetry. Each student's name is followed by a score of 10/10.

Top Header: Displays the course name 'B.A. 1st SEM CBCS(21-23)', the assignment title 'HOME ASSIGNMENT : What are the main causes of rural backwardness?', and the point value '10 points'. There are also buttons for 'Return' and 'Open Kami Grader'.

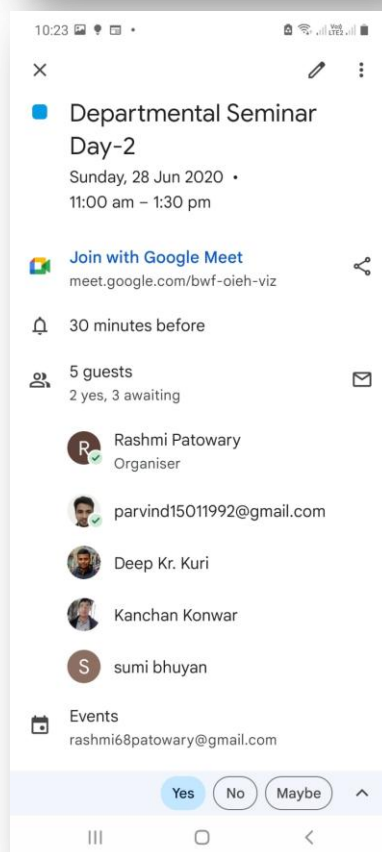
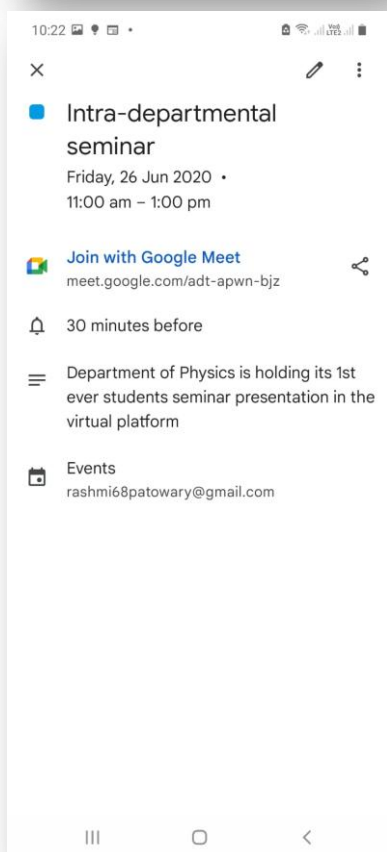
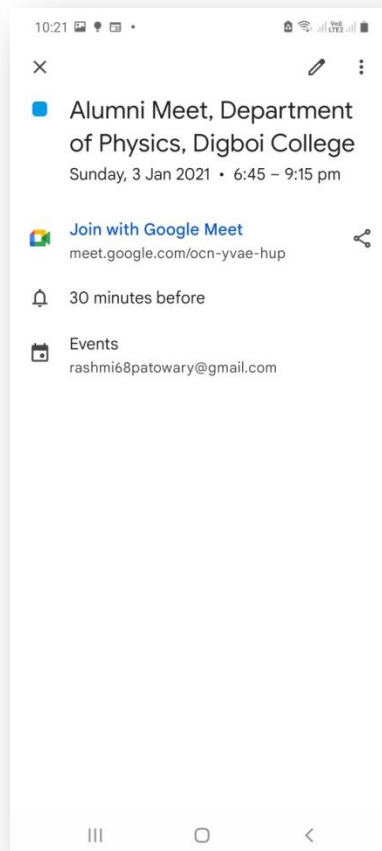
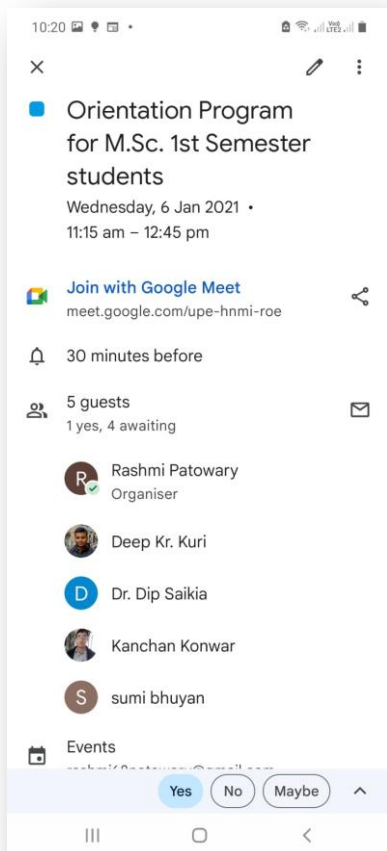
Main Content Area: Shows a grid of student submissions. The grid is organized into two columns: 'Turned in' (74 submissions) and 'Assigned' (34 submissions). The 'Turned in' column shows submissions from 7 SEvEn, Anannya Saikia, Ananya Chetia pator, Anjali Chetry, Anjita Sarmah, Anjoli Chetry, and Ankita Chetry. The 'Assigned' column shows submissions from Anannya Chetia pator, Anjali Chetry, Anjita Sarmah, Anjoli Chetry, Ankit Chetry, Bidyut Jyoti neog, Bondona Borah, and Chinmoyee Konwar. Some submissions are marked as 'Missing'.

Glimpses of Google Classroom used by Faculties for Teaching, Learning and Evaluation

Department of Zoology



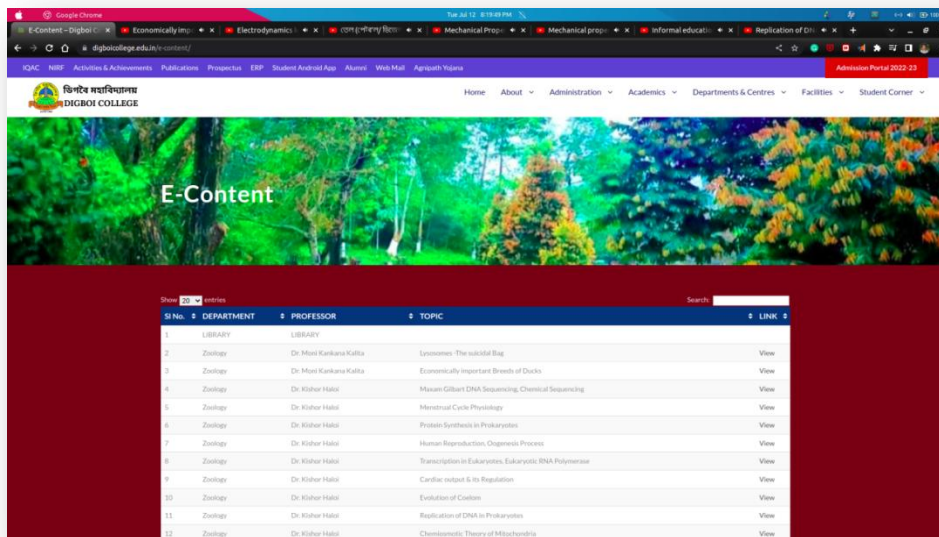
Glimpses of academic activities conducted using Google Classroom



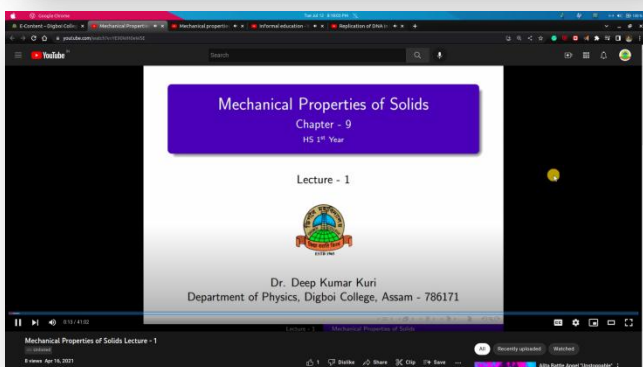
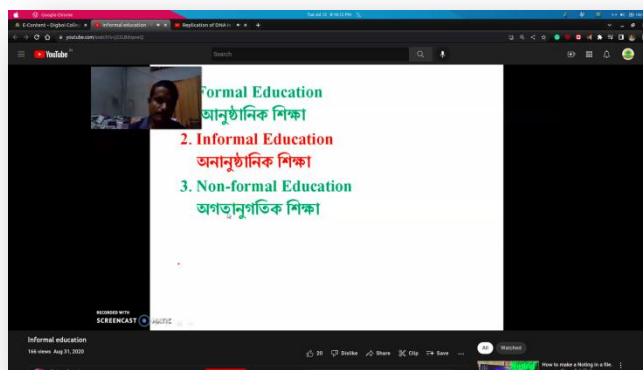
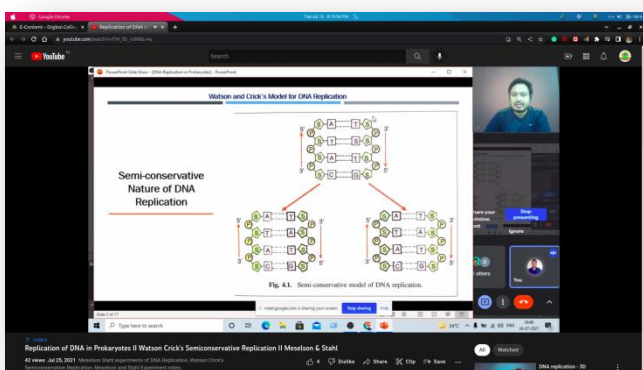
Section - D

E-Contents

Glimpses of E-Contents developed by faculty members



E-Contents are available at: <https://www.digboicollege.edu.in/e-content/>



Section - E

Recording of Video Lectures

Glimpses of video lectures recorded by faculty members

From equation (1) Let $t = t_0 = 0$ be the cut-off time when the charcoal was formed, and thus $T < 0$. For $t > T$, ^{14}C decays at the rate

$$\frac{dN}{dt} = -kN, N(0) = n_0$$

and $N(T) = n_0 e^{-kT}$

or $T = -\frac{1}{k} \log \left(\frac{N(T)}{N(0)} \right)$

And we have $N(T) = 1.69$ and $N(0) = 13.5$, putting these values in T we get,
 $T = 16,692 \pm 90$ years.

You must see the following You tube videos and write explanation from videos.

<https://youtu.be/JYZkRkg0pM> (Compartmental Model)

<https://youtu.be/Jfb5OpEX4Q> (exponential decay model)

Lectures delivered and recorded using Zoom

Prove: $|z_1 + z_2| \leq |z_1| + |z_2| \rightarrow \textcircled{A}$

$|z_1 + z_2| = \sqrt{(x_1 + x_2)^2 + (y_1 + y_2)^2}$ $|z_1| = \sqrt{x_1^2 + y_1^2}$ $|z_2| = \sqrt{x_2^2 + y_2^2}$

\textcircled{A} will be proved if

$$\sqrt{(x_1 + x_2)^2 + (y_1 + y_2)^2} \leq \sqrt{x_1^2 + y_1^2} + \sqrt{x_2^2 + y_2^2}$$

Squaring

$$(x_1 + x_2)^2 + (y_1 + y_2)^2 \leq (x_1^2 + y_1^2) + 2\sqrt{(x_1^2 + y_1^2)(x_2^2 + y_2^2)} + x_2^2 + y_2^2$$

$$2x_1x_2 + 2y_1y_2 \leq 2\sqrt{(x_1^2 + y_1^2)(x_2^2 + y_2^2)}$$

Lectures recorded using Screencast-O-matic

ATP-P_i **DNA (Gene) Sequencing** 1977

A. Maxam Gilbert Chemical Method of DNA Sequencing:

- ✓ In the 5' end alkaline phosphatase enzyme cleaved the phosphate group.
- ✓ DNA molecule can be radiolabeled (32P group) at either 5' end by using polynucleotide kinase.
- ✓ One end of radiolabeled double stranded DNA is removed by using endonuclease.
- ✓ Denaturation of DNA into single strand.
- ✓ The mixture is separated in four sets each set treated with different reagents.

Handwritten notes: $\text{ATP} \xrightarrow{\text{PK}} \text{ATP-P}_i$, $\text{DNA} \xrightarrow{\text{Alkaline Phosphatase}} \text{DNA-P}_i$, $\text{DNA} \xrightarrow{\text{Endonuclease}} \text{DNA-P}_i$, $\text{DNA} \xrightarrow{\text{Denaturation}} \text{DNA-P}_i$, $\text{DNA} \xrightarrow{\text{Separation}} \text{DNA-P}_i$

Stress and Strain

A cylinder is stretched by two equal forces applied normal to its cross-sectional area.

The restoring force per unit area in this case is called **tensile stress**.

If the cylinder is compressed under the action of applied forces, the restoring force per unit area is known as **compressive stress**.

Tensile or compressive stress can also be termed as longitudinal stress.

Diagram (a) shows a cylinder of length L and cross-sectional area A under tension forces F at both ends, resulting in an elongated length $L + \Delta L$. Diagram (b) shows the same cylinder under compression forces F , resulting in a shortened length $L - \Delta L$.

Lectures recorded using OBS Studio

Section - F

Online Live Classes using Virtual platforms

Part - I

Online Live Classes conducted by Faculties

Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Mathematics



	Destinations				Supply	Row difference (Penalty)			
	D1	D2	D3	D4					
D1	19	30	50	10	7	7(9)	7(9)	2(40)	
D2	70	30	40	60	9	9(10)	9(20)	9(20)	
D3	40	8	70	20	18	18(12)	10(20)	10(50)	X
Difference	5(21)	8(22)	7(10)	14(10)					
	5(21)	X	7(10)	14(10)					
	X		7(10)	14(10)					

a

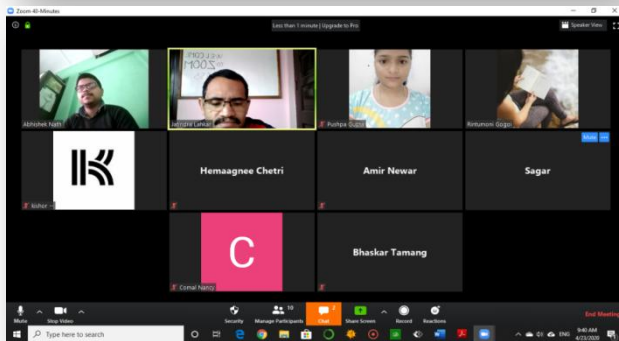
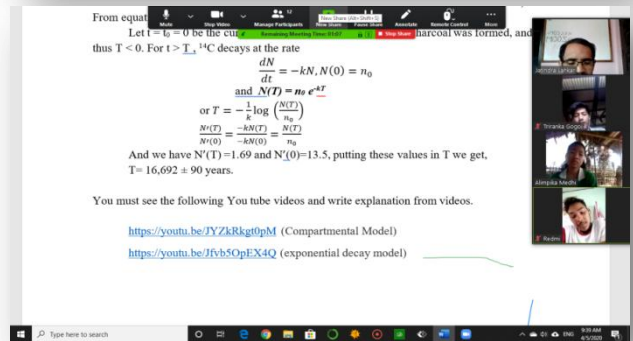
Degeneracy of transportation problem.

A BFS for the general transportation problem must contain $(m+n-1)$ positive allocation in independent position in the transportation table. A solution will be called degenerate when the number of occupied cells is less than the required no. $(m+n-1)$. In such cases the current solution can not be improved because it is not possible to draw a closed loop for every occupied cell. Also the values of dual variables u_i and v_j which are used to test the opportunity cost can not be computed. Thus we need to remove the degeneracy to improve the given solution.

The degeneracy in transportation problem may occur at two stages:

When obtaining an initial solution, we may have less than $m+n-1$ allocations.

At any stage while moving towards optimal solution. This happens when two or more occupied cells with the same minimum allocations become unoccupied simultaneously.

From equation (1) $\frac{dN}{dt} = -kN$, $N(0) = N_0$

Let $t = t_{1/2}$ be the half-life of the substance. At this time, $N = \frac{N_0}{2}$.

Thus $t = t_{1/2}$ for $N = \frac{N_0}{2}$.

and $N(t) = N_0 e^{-kt}$

or $T = -\frac{1}{k} \log \left(\frac{N(t)}{N_0} \right)$

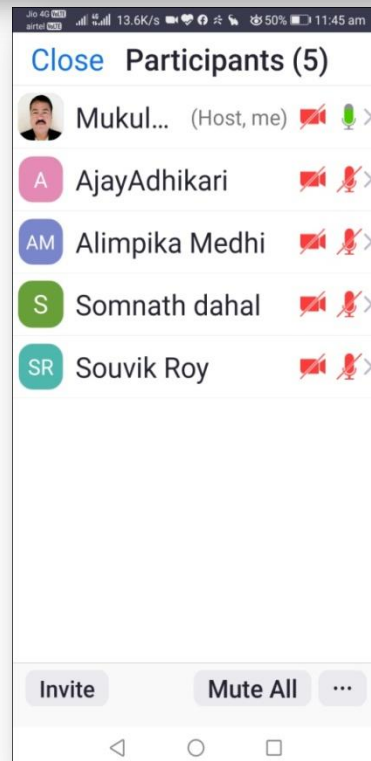
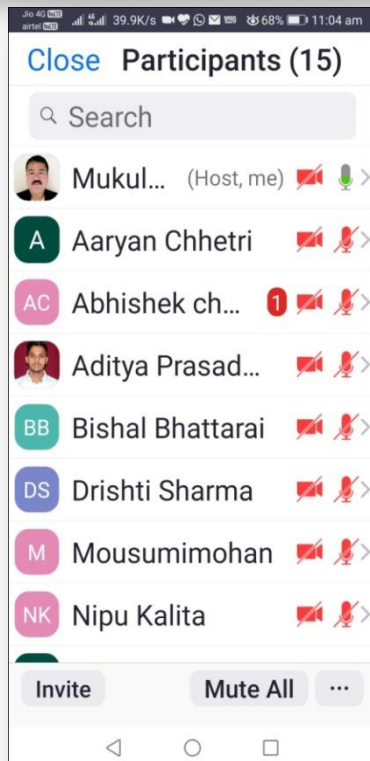
$\frac{N(t)}{N_0} = -\frac{kN(t)}{N_0} = -\frac{kT}{N_0}$

And we have $N'(T) = 1.69$ and $N'(0) = 13.5$, putting these values in T we get, $T = 16,692 \pm 90$ years.

You must see the following You tube videos and write explanation from videos.

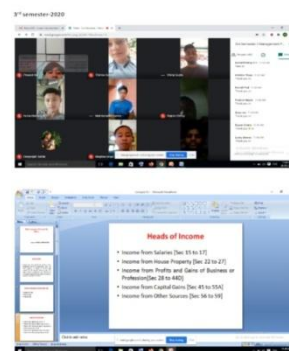
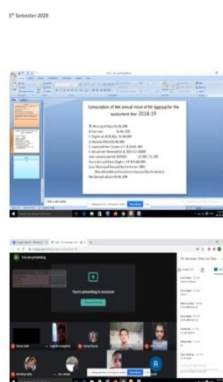
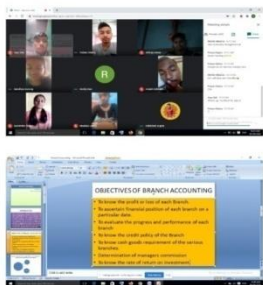
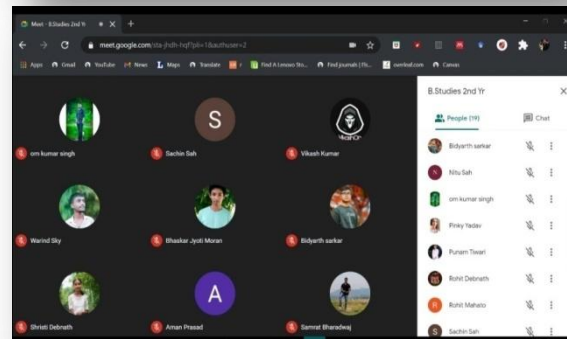
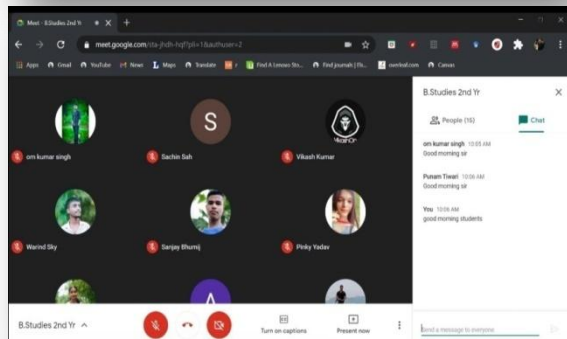
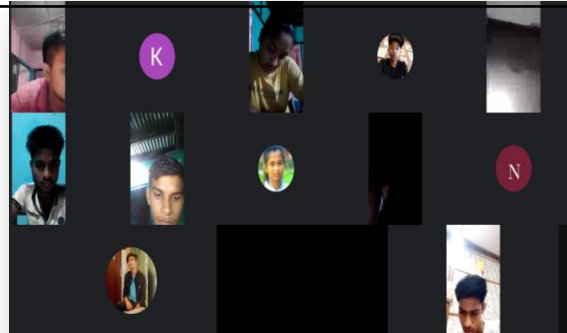
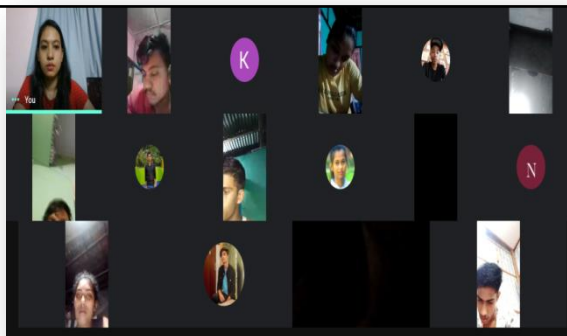
<https://youtu.be/JYzKkg0pM> (Compartmental Model)

<https://youtu.be/Jfcb5OpEX4Q> (exponential decay model)



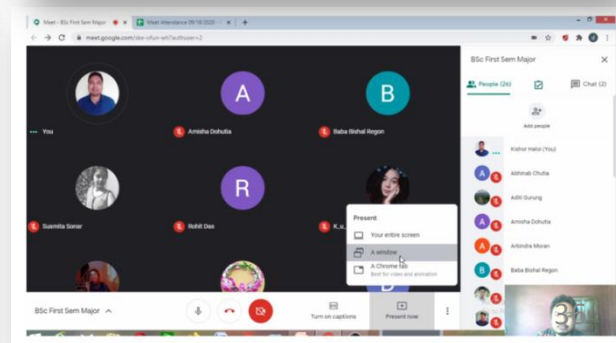
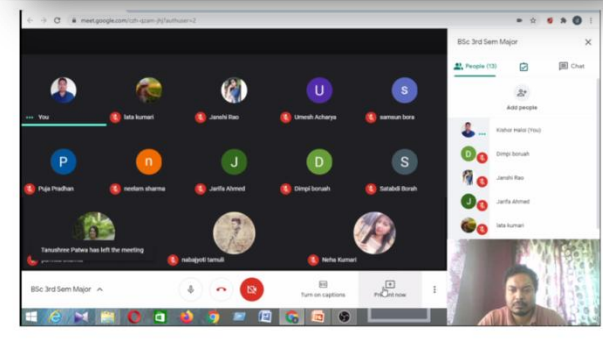
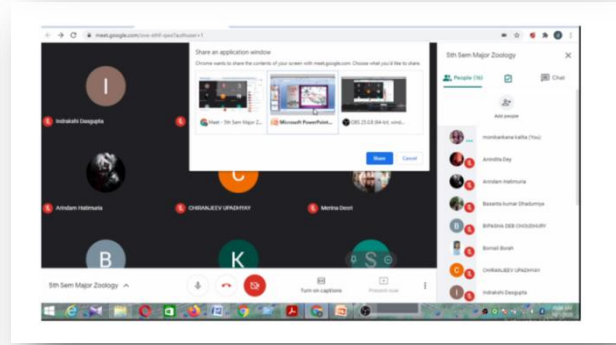
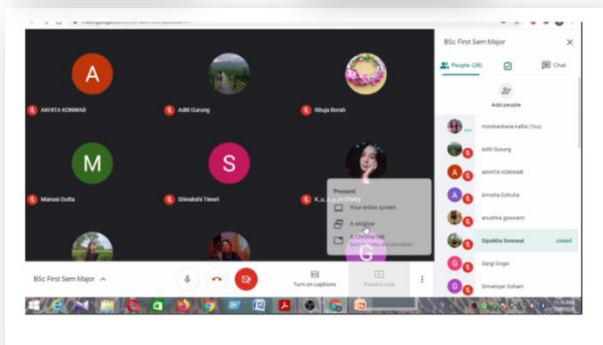
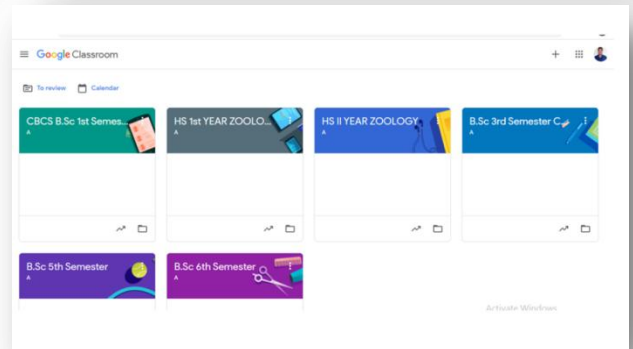
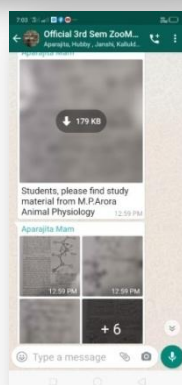
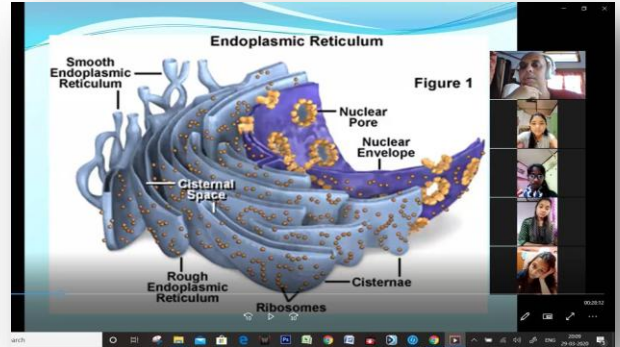
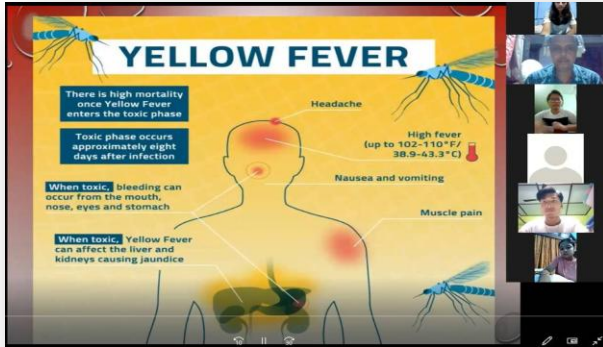
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Commerce



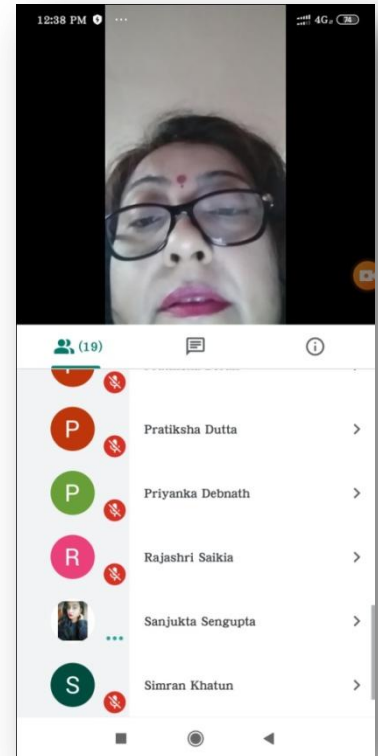
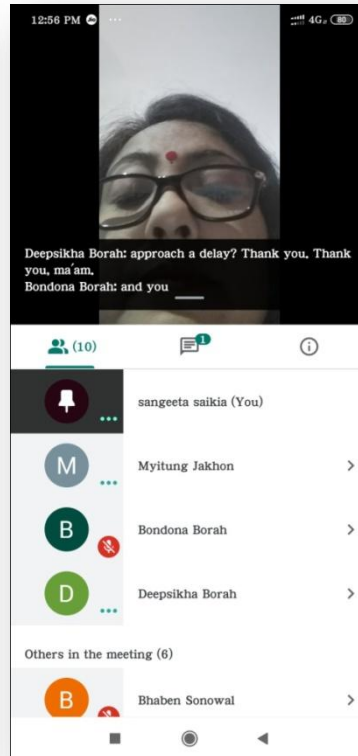
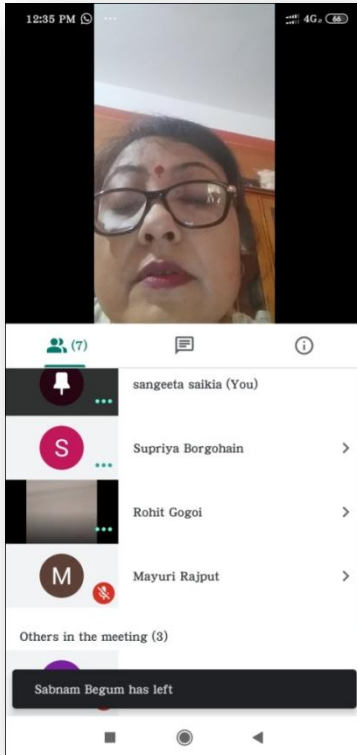
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Zoology



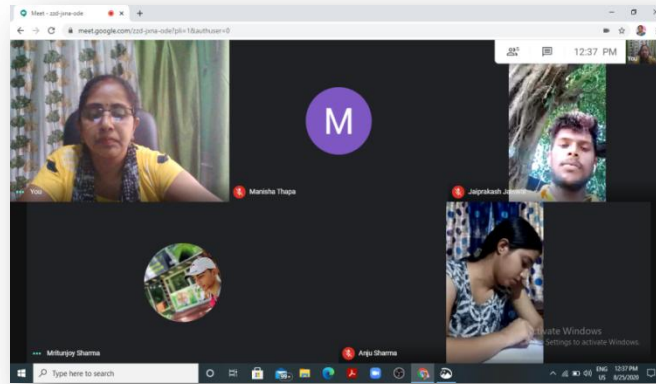
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Geography



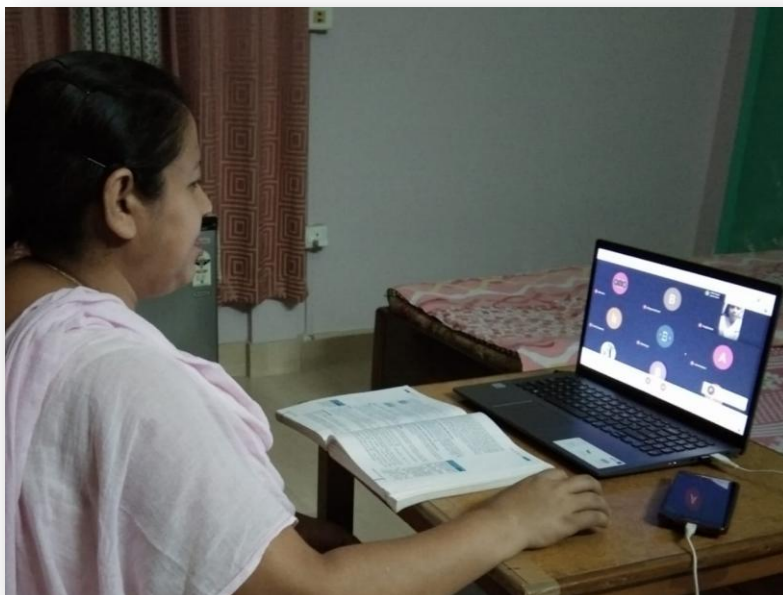
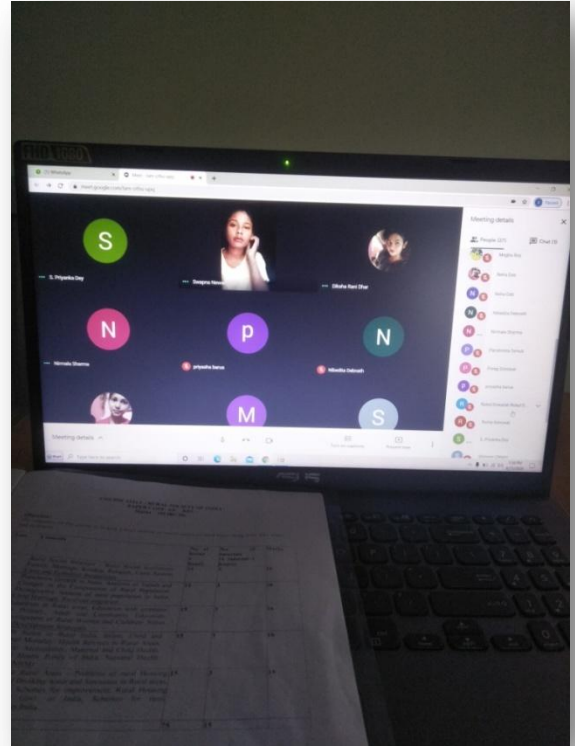
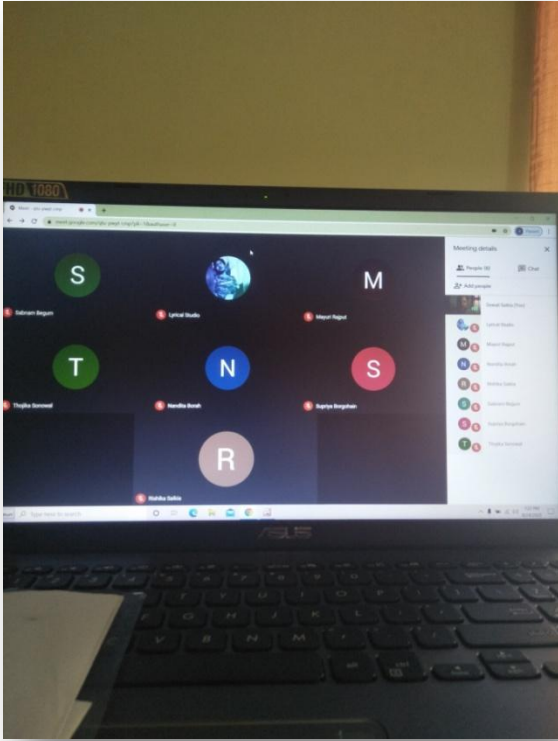
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Hindi



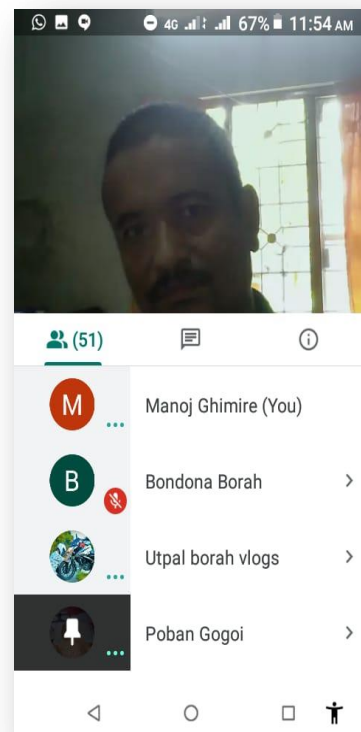
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Rural Development



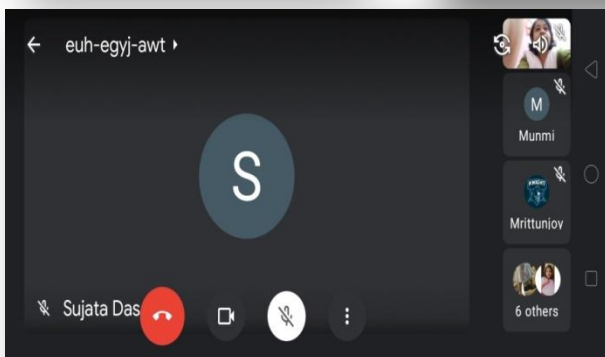
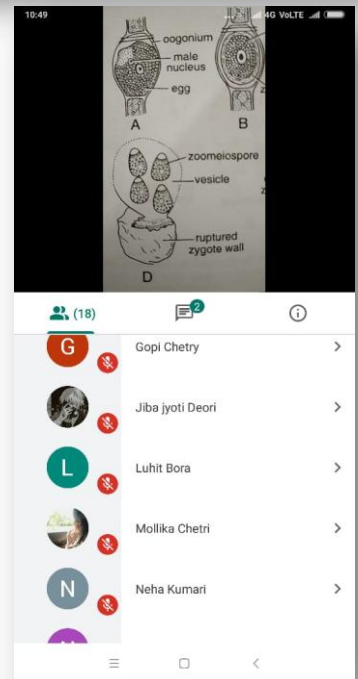
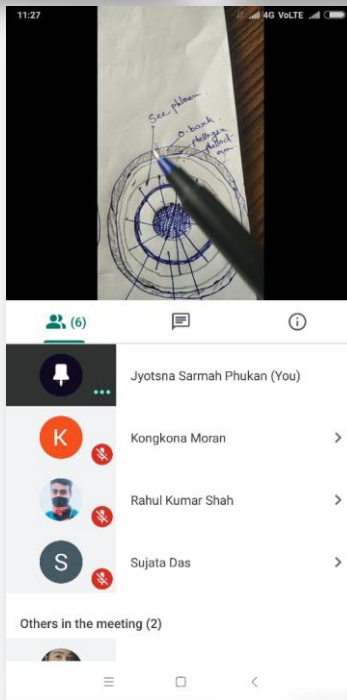
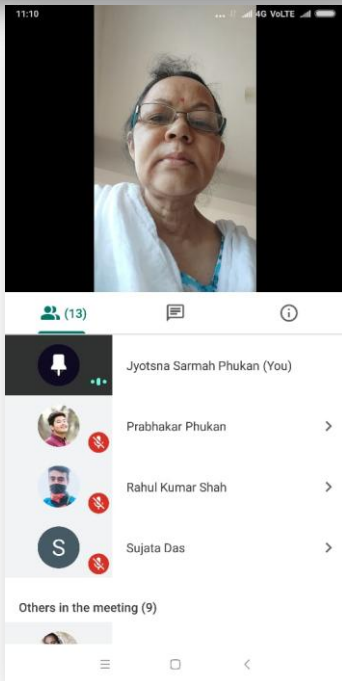
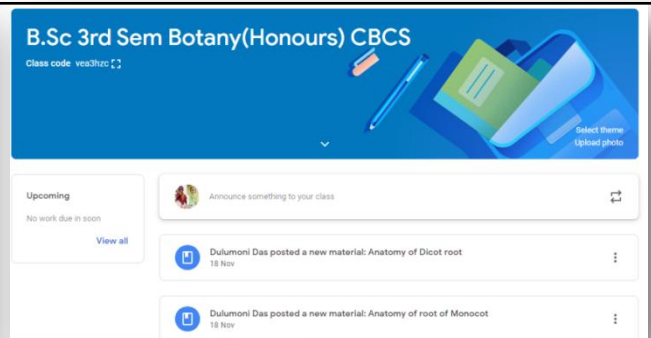
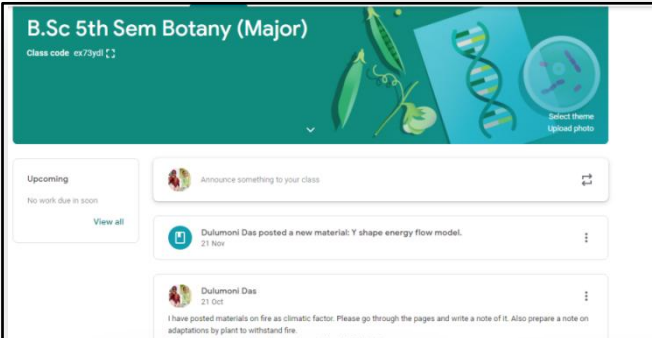
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Education



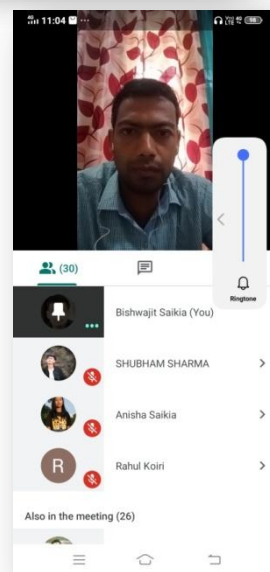
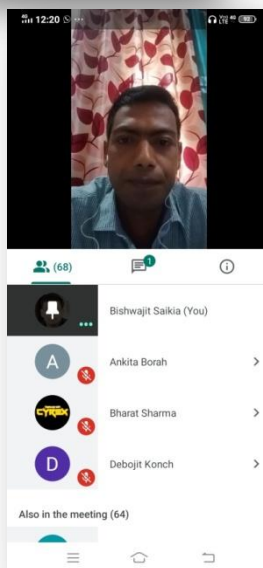
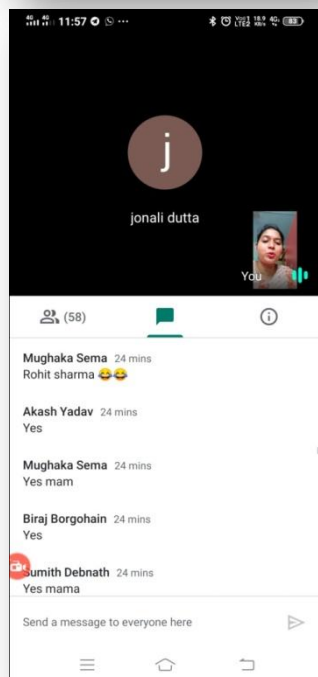
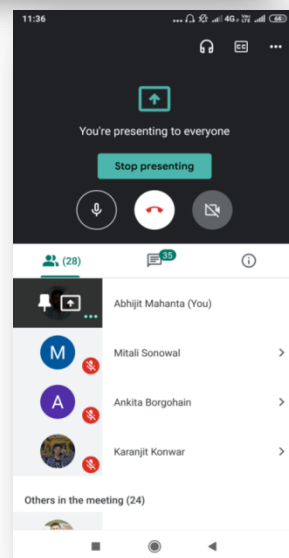
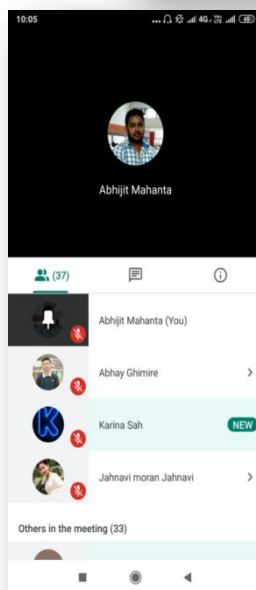
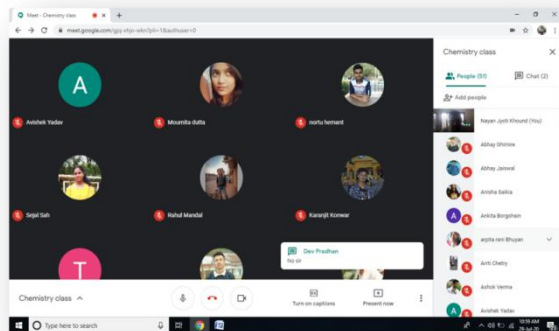
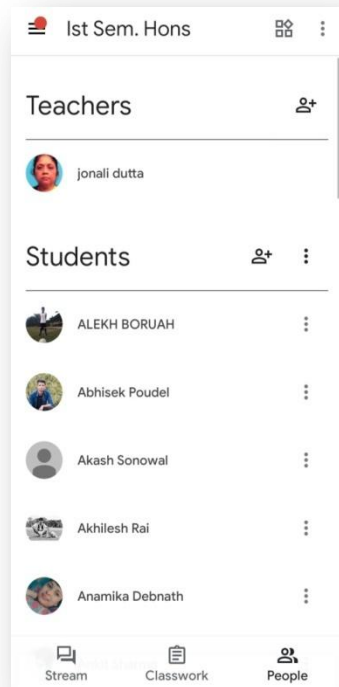
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Department of Botany



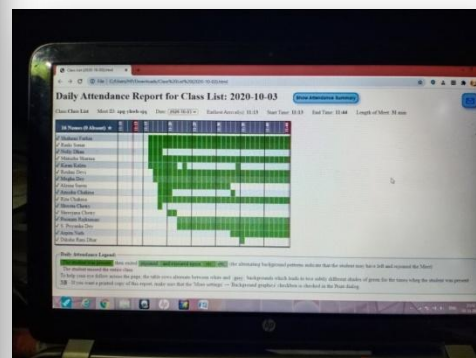
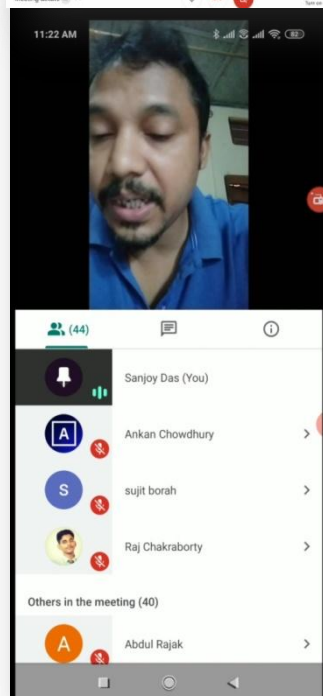
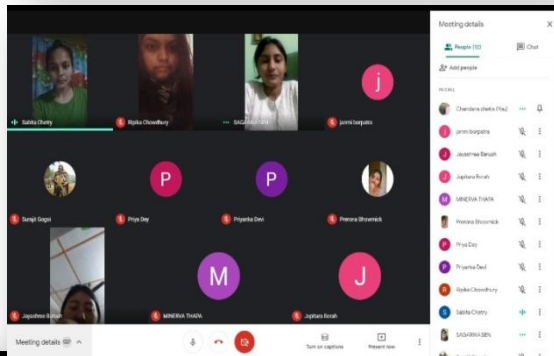
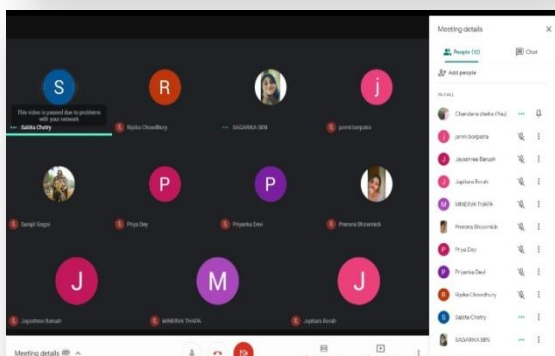
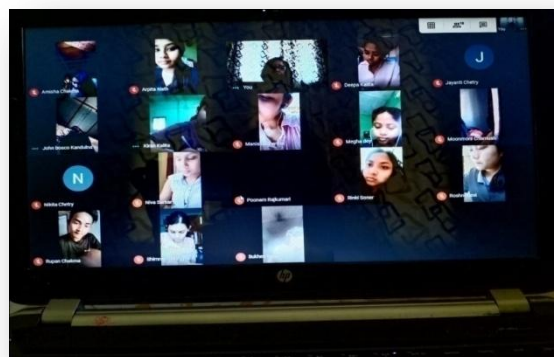
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Department of Chemistry



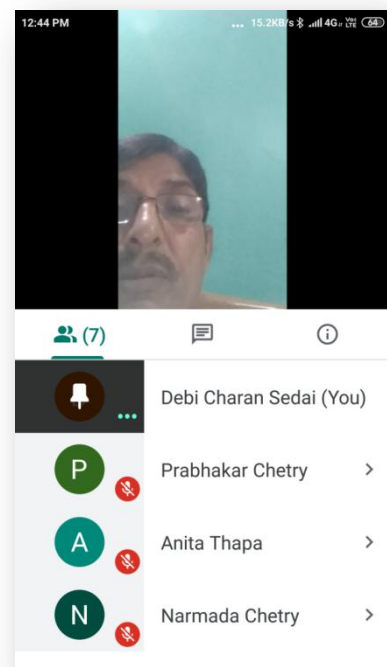
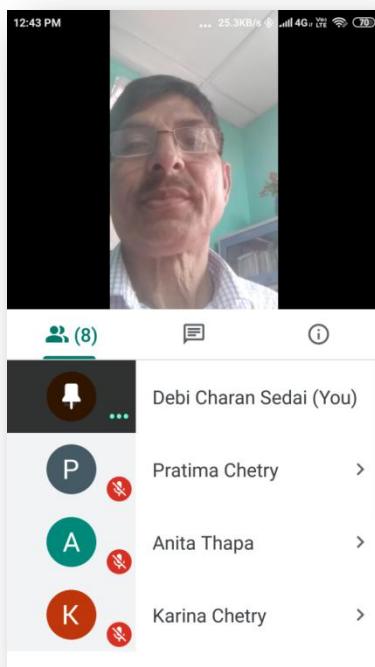
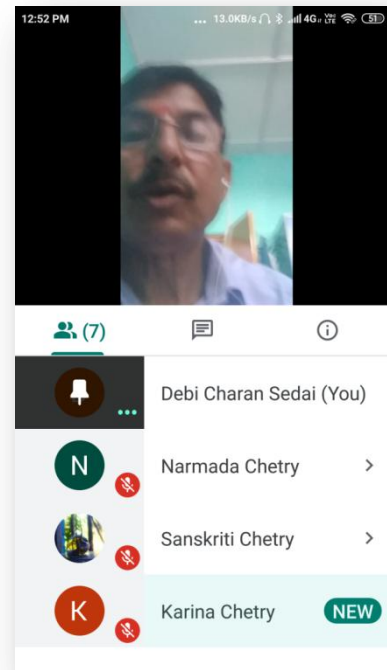
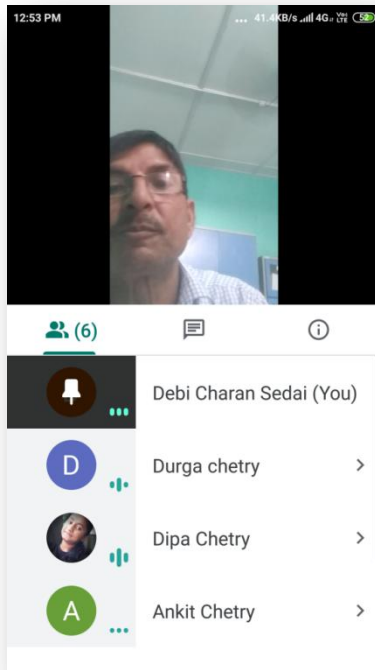
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Department of English



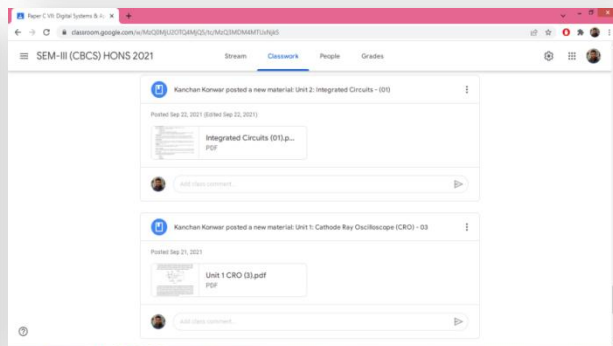
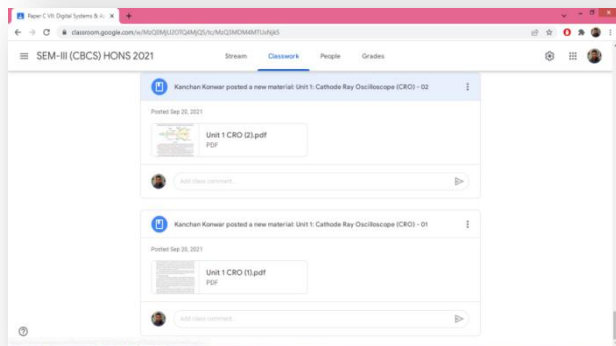
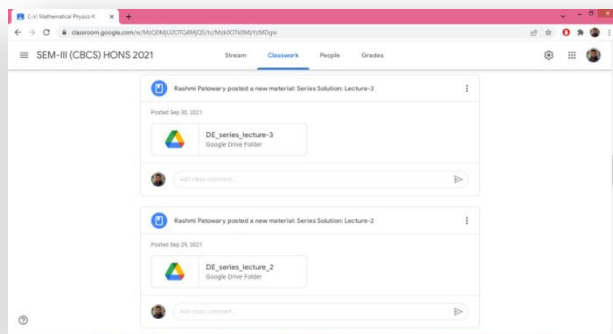
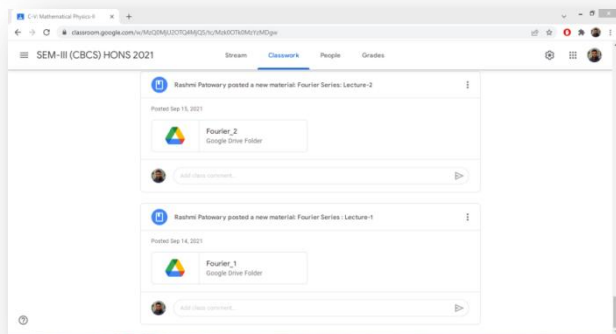
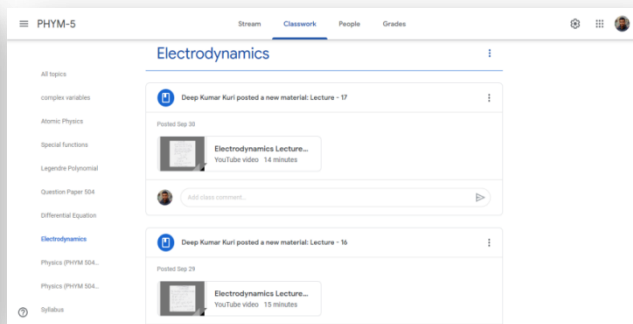
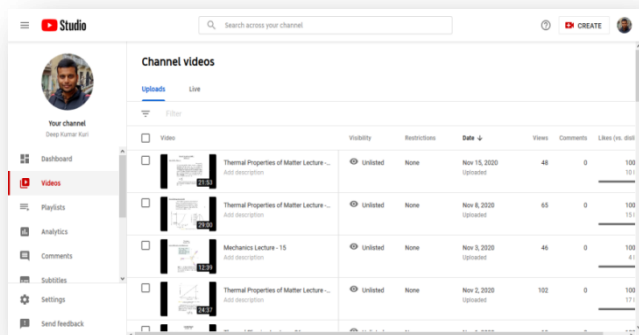
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Department of Nepali



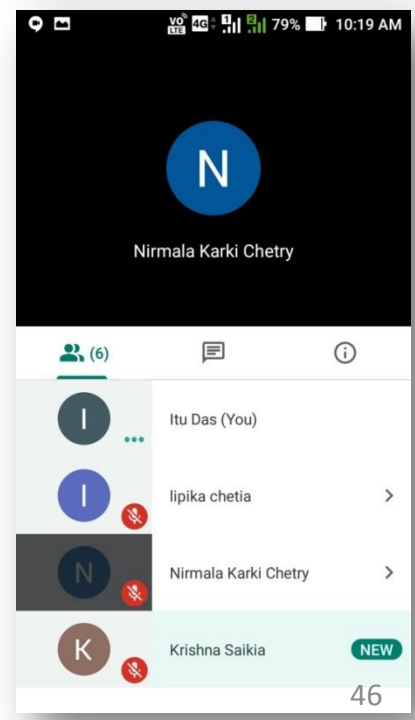
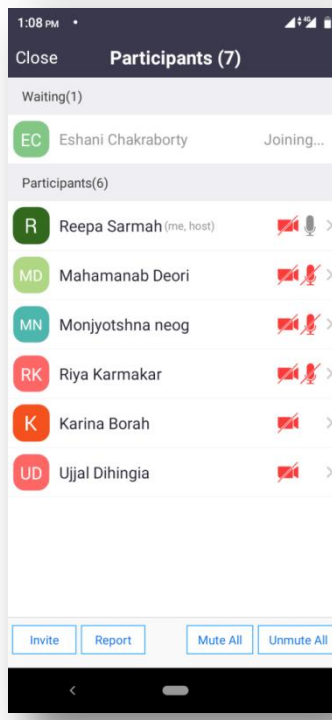
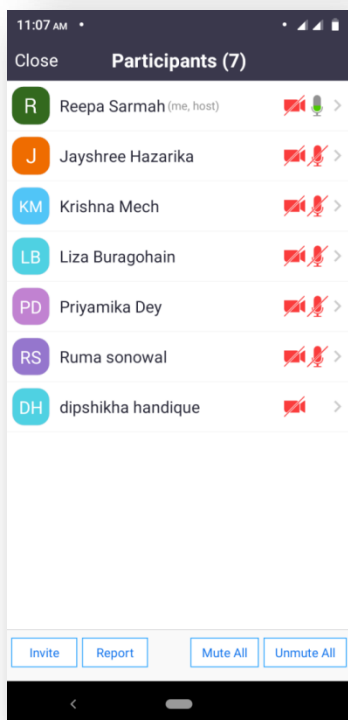
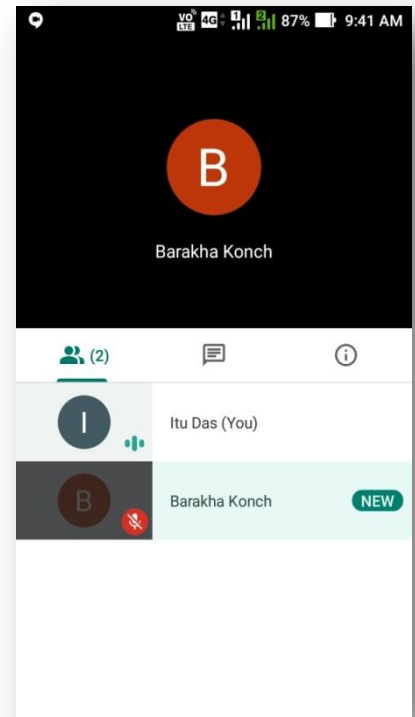
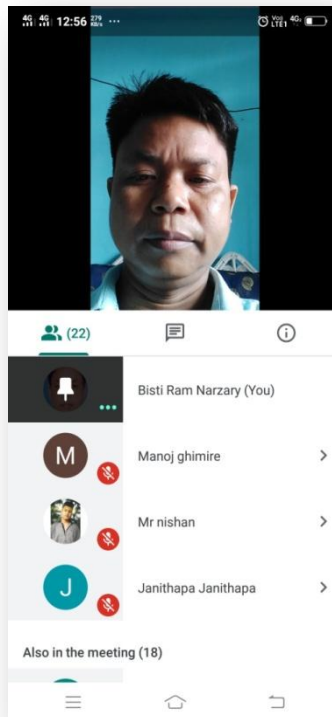
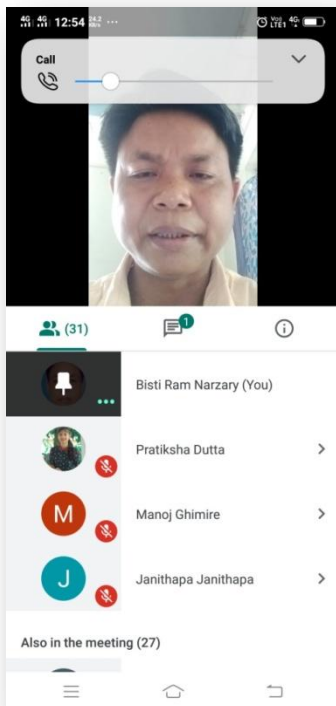
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Physics



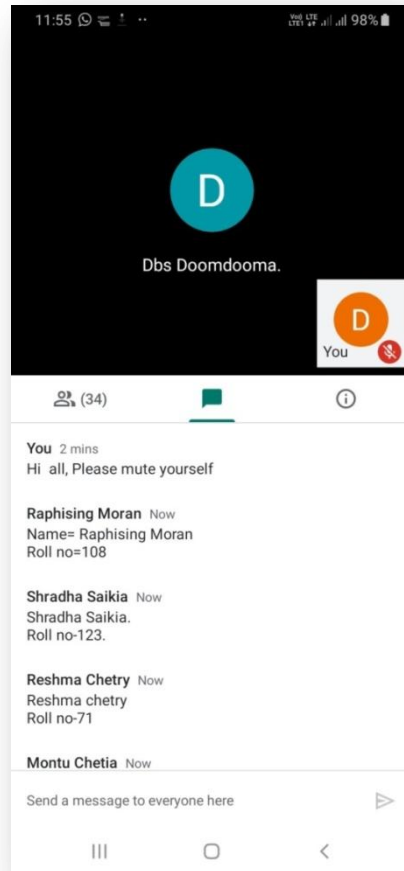
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Philosophy



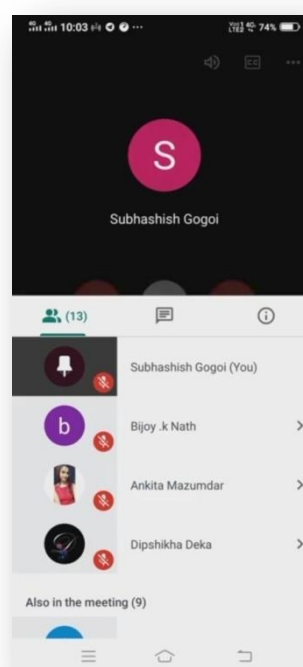
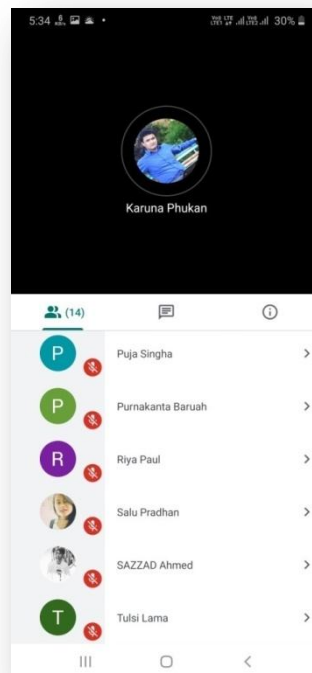
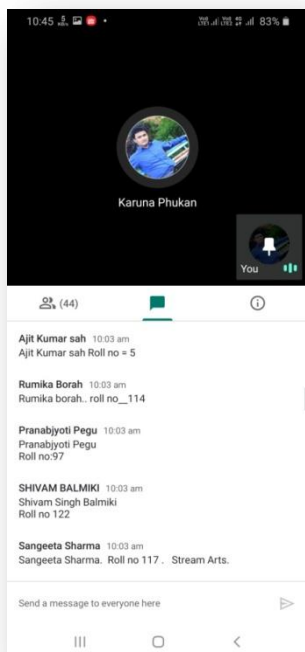
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Assamese



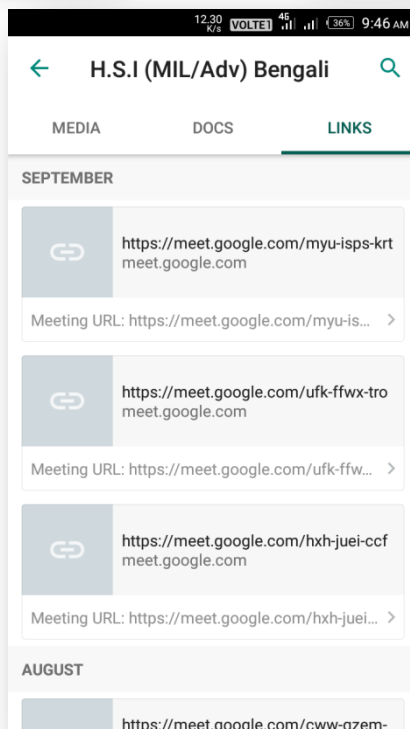
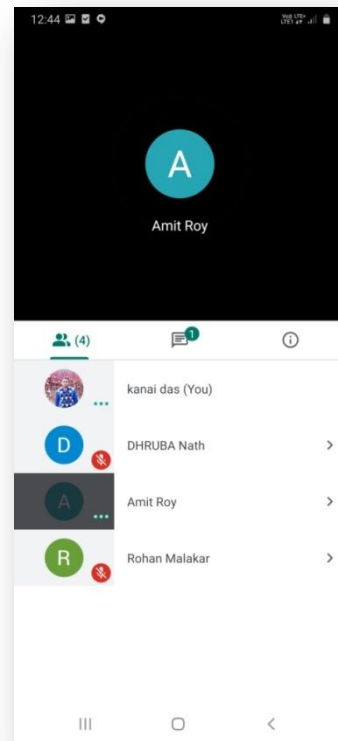
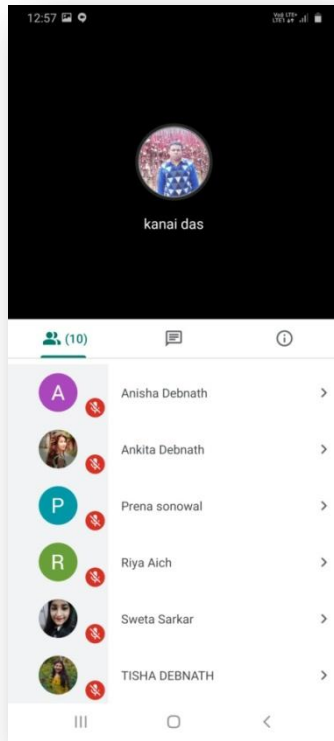
Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Economics

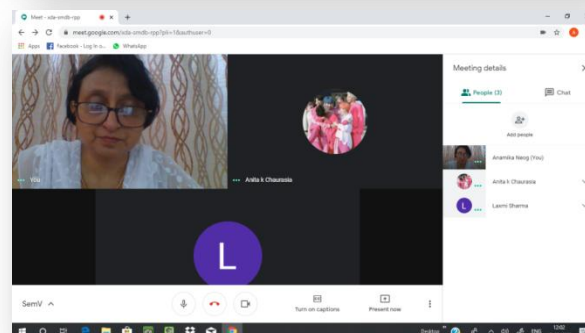


Glimpses of Online Live Classes using various virtual platforms such as Google Meet, Zoom, Cisco Webex, Microsoft Teams etc.

Department of Bengali



Department of History



Part - II

**Online PowerPoint
Presentations delivered
by students**

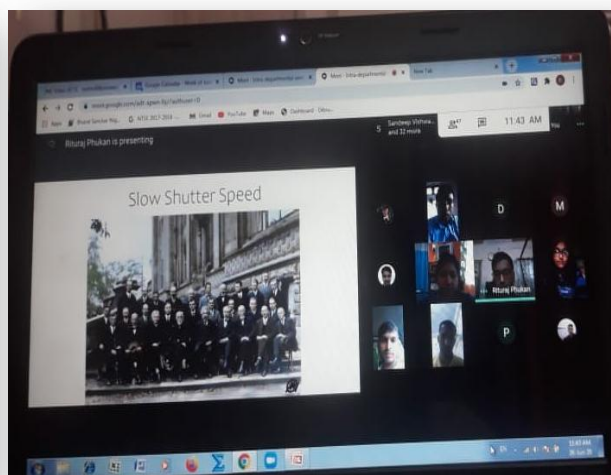
Glimpses of students delivering PowerPoint presentations online

DATE: 26-06-2020

1. "Astrophotography: How you can start today"
By Rituraj Phukan

2. "Classification of elementary particles"
By Prantik Mukherjee

3. "Optical Fibre"
By Manisha Sharma



Deepankar Sharma is presenting

WORKING PRINCIPLE OF OPTICAL FIBER

Total internal reflection in optical fiber

Light Signal 1
Light Signal 2

People (27)

Chat

Deepankar Sharma (Presenting)

Bishal Deb Roy is presenting

What is Laser?

Light Amplification by Stimulated Emission of Radiation.

It is a source which emit an intense, almost perfectly monochromatic, directional and highly coherent beam of light.

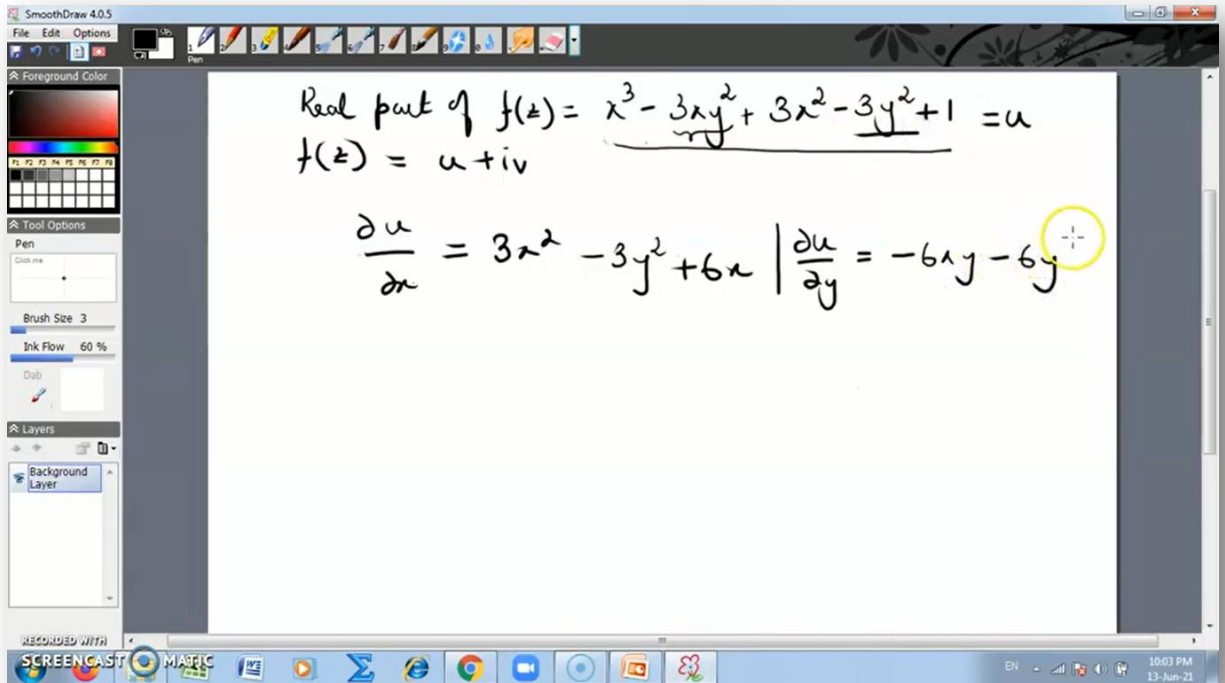
People (18)

Meeting details

Section - G

**Preparation and delivery of
lectures using
Digital Board / Pen Tablet**

Glimpses of video lectures using Digital Board / Pen Tablet



SmoothDraw 4.0.5

File Edit Options

Foreground Color

Pen

Brush Size 3

Ink Flow 60 %

Layers

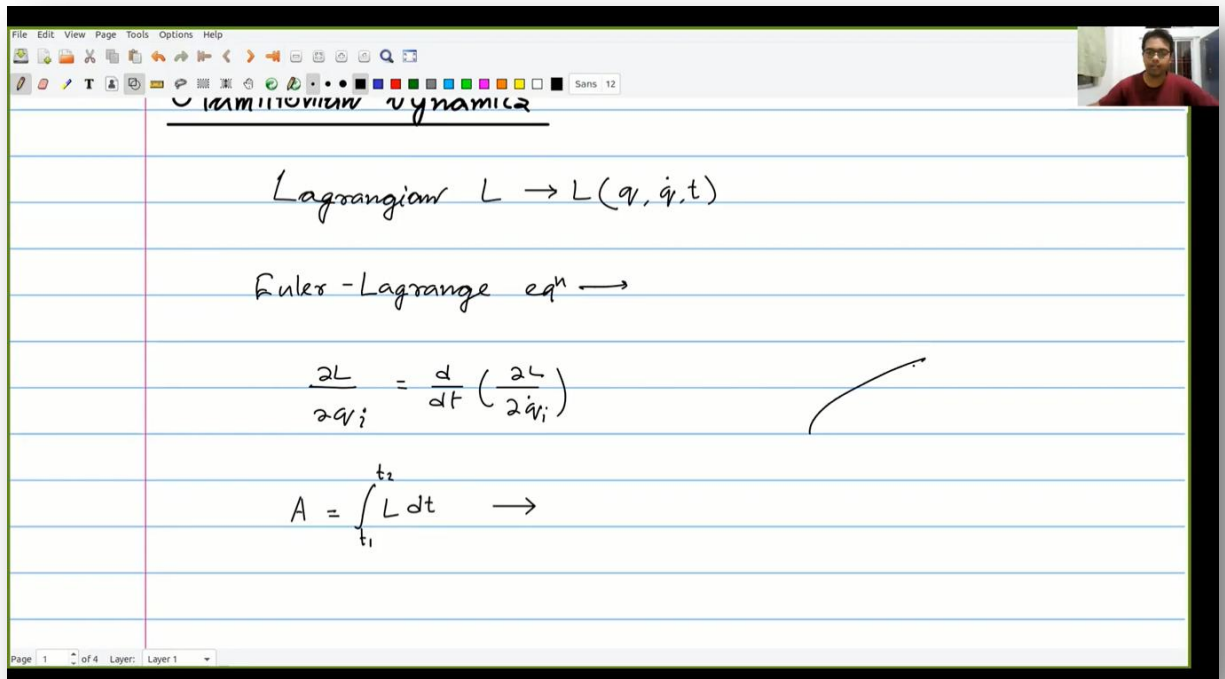
Background Layer

Real part of $f(z) = x^3 - 3xy^2 + 3x^2 - 3y^2 + 1 = u$
 $f(z) = u + iv$

$$\frac{\partial u}{\partial x} = 3x^2 - 3y^2 + 6x \quad \left| \quad \frac{\partial u}{\partial y} = -6xy - 6y \right.$$

RECORDED WITH SCREENCAST MATE

EN 10:03 PM 13-Jun-21



File Edit View Page Tools Options Help

Hamiltonian dynamics

Lagrangian $L \rightarrow L(q, \dot{q}, t)$

Euler-Lagrange eqⁿ \rightarrow

$$\frac{\partial L}{\partial q_i} = \frac{d}{dt} \left(\frac{\partial L}{\partial \dot{q}_i} \right)$$
$$A = \int_{t_1}^{t_2} L dt \rightarrow$$

Page 1 of 4 Layer: Layer 1

Section - H

Virtual Laboratory

Experiment are demonstrated to students in the virtual laboratory



An MoE Govt of India Initiative



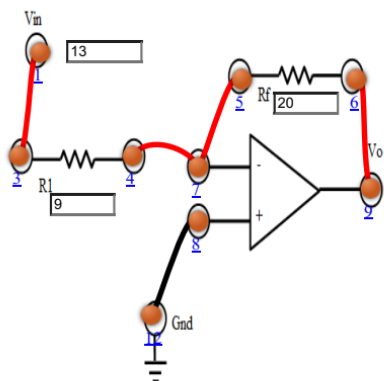
Inverting Opamp

INSTRUCTION

EXPERIMENTAL TABLE

Resistance: 9 K Ω

Serial No.	Input Voltage V	Output Voltage V	Current mA
1	2	-4.44	0.00700
2	4	-8.89	0.0140
3	7	-15.6	0.0245
4	10	-22.2	0.0350
5	13	-28.9	0.0455



CONTROLS

Input volt : Volt
Resistance (R_1) : Kohms
Resistance (R_f): Kohms

Add to Table

Plot

Clear

-28.9

0.0455

-2.222222

Check connection

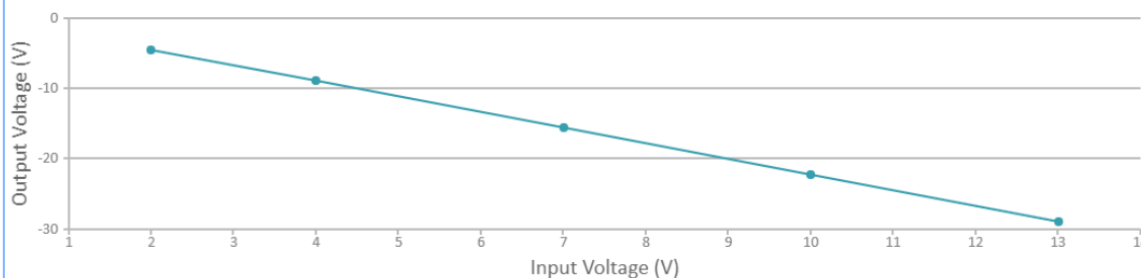
Delete all connection

GRAPH PLOT

Vo-Vi Plot



Print



A glimpse of Inverting OPAMP experiment performed in the virtual laboratory by the students of M.Sc. Physics