RABINDRA MAHAVIDYALAYA

Affiliated to the University of Burdwan
Champadanga, Hooghly, West Bengal, Pin.-712401
Estd.- 1971

Ref. No.....

Date.....

This is to certify that the following ICT enabled tools for effective teaching-learning process was used by the various Departments in the session 2021-2022 at Rabindra Mahavidyalaya, Champadanga, Hooghly, West Bengal

Principal
Rabindra Mahavidyalaya
Champadanga • Hooghly

Dr. Prasanta Bhattacharyya
Principal

Session 2021-22

Teachers use ICT enabled tools for effective teaching-learning process.

Due to Covid-19 entire teaching learning was switched to online mode. Google Meet, Zoom, etc were used for teaching through. desktop, Laptop. Smart Phone etc. Video, PPT, PDF, excel, etc files were shared for study material. E-Journals and e-books were used for effective teaching and learning.

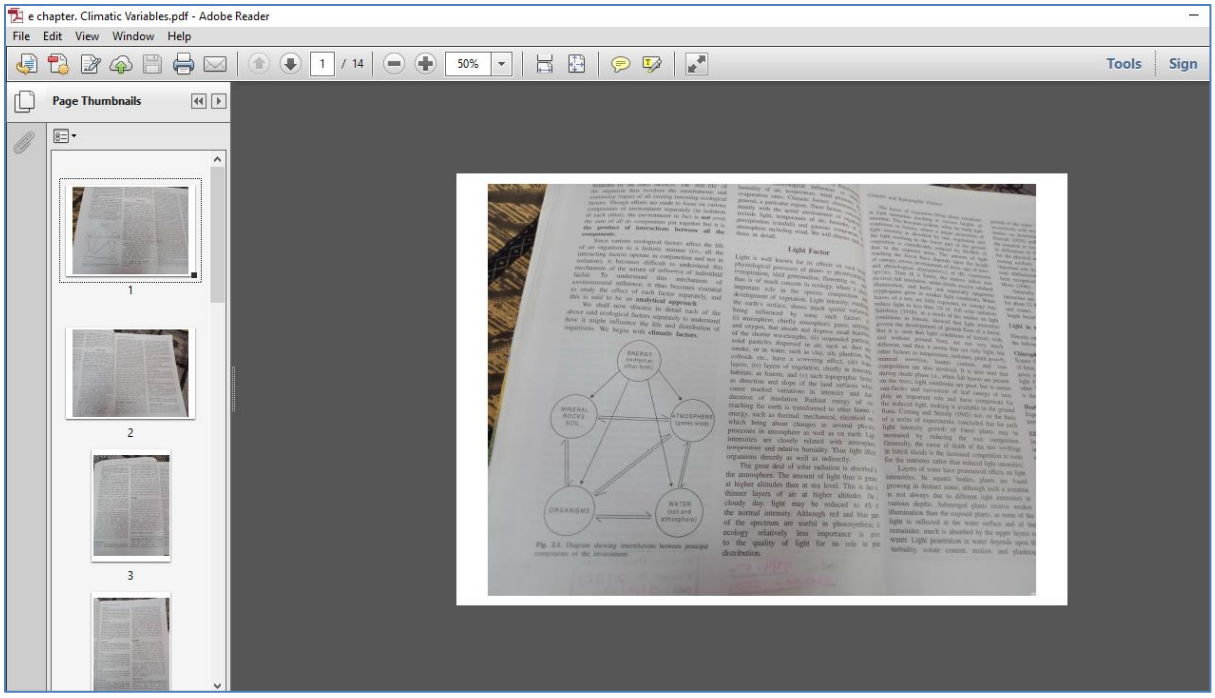
Some screenshots of the same are attached here.

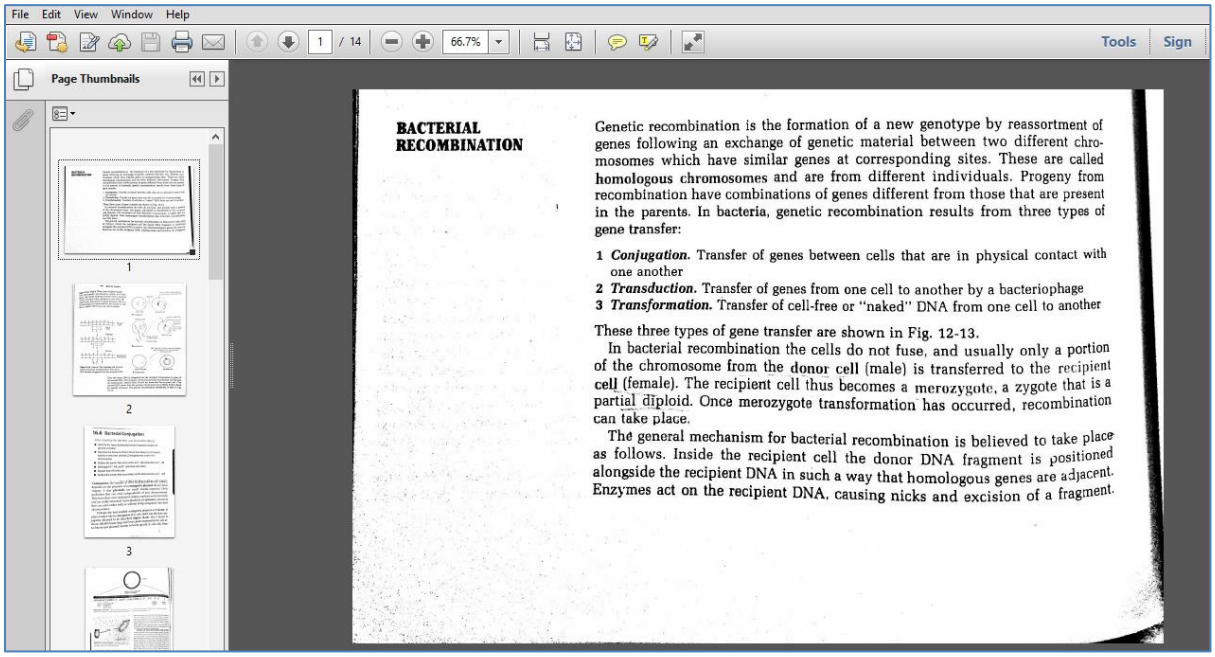
Department of Botany (2021-2022)

Snapshots/ screenshots of E-resources and techniques used

Screenshot (sample) of E- Journal Resource

PDF Sample


e chapter. Climatic Variables.pdf - Adobe Reader
File Edit View Window Help
Page Thumbnails
Tools
Sign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Page Thumbnails
Tools
Sign
BACTERIAL RECOMBINATION
Genetic recombination is the formation of a new genotype by reassortment of genes following an exchange of genetic material between two different chromosomes which have similar genes at corresponding sites. These are called homologous chromosomes and are from different individuals. Progeny from recombination have combinations of genes different from those that are present in the parents. In bacteria, genetic recombination results from three types of gene transfer:
1 Conjugation. Transfer of genes between cells that are in physical contact with one another
2 Transduction. Transfer of genes from one cell to another by a bacteriophage
3 Transformation. Transfer of cell-free or "naked" DNA from one cell to another
These three types of gene transfer are shown in Fig. 12-13.
In bacterial recombination the cells do not fuse, and usually only a portion of the chromosome from the donor cell (male) is transferred to the recipient cell (female). The recipient cell thus becomes a merozygote, a zygote that is a partial diploid. Once merozygote transformation has occurred, recombination can take place.
The general mechanism for bacterial recombination is believed to take place as follows. Inside the recipient cell the donor DNA fragment is positioned alongside the recipient DNA in such a way that homologous genes are adjacent. Enzymes act on the recipient DNA, causing nicks and excision of a fragment.

Unit 1_1.8_Complex permanent tissue (Xylem).pdf - Adobe Reader

File Edit View Window Help

1 / 5 75% Tools

Page Thumbnails

1 2 3

Core Course (CC- 1C): Plant Anatomy and Embryology
Unit 1: Meristematic and permanent tissues
1.8_Complex permanent tissue
Topic: XYLEM

II. জটিল স্থায়ী কলা (Complex Permanent Tissues) : *আকার ও গঠন ভিন্ন হওয়া সত্ত্বেও একই রকম কার্যসম্পাদনকারী এবং একই উৎস থেকে সৃষ্টি হয়েছে এরকম কোশ সমষ্টিকে জটিল স্থায়ী কলা বলে।*

এই কলা উদ্ভিদের সংবহন কলা বা পরিবহণ কলা নামে পরিচিত। এই জটিল কলা দুই রকমের, যথা—জাইলেম কলা ও ফ্লোয়েম কলা। এই জাইলেম ও ফ্লোয়েমের মাধ্যমে যথাক্রমে জল ও খাদ্য বিভিন্ন অঙ্গে প্রবাহিত হয়, তাই এদের সংবহন কলা (conducting tissue) বলে। প্রধানত জাইলেম ও ফ্লোয়েম একত্রে নালিকা বান্ডিল (vascular bundle) গঠন করে।

জাইলেম (Xylem) :

সংজ্ঞা (Definition) : *উদ্ভিদের যে জটিল স্থায়ী কলার মাধ্যমে মূল থেকে শোষিত জল ও জলে দ্রবণীয় খনিজ লবণ উদ্ভিদের পাতায় পরিবাহিত হয়, তাকে জাইলেম কলা বলে।*

এটি গ্রিক শব্দ '*xylos*' (= কাষ্ঠ) থেকে এসেছে।

গঠন (Structure) :

(i) জাইলেম হল অন্যতম জটিল স্থায়ী কলা।

(ii) এই জাইলেম ও ফ্লোয়েম একত্রে নালিকা বান্ডিল (vascular bundle) গঠন করে অর্থাৎ জাইলেম নালিকা বান্ডিলের একটি অংশ গঠন করে।

(iii) জাইলেম বিভিন্ন প্রকৃতির মৃত ও সজীব কোশ দ্বারা গঠিত। জাইলেম প্যারেনকাইমা জাইলেমের একমাত্র সজীব কলা।

(iv) সংবহনে অংশগ্রহণকারী ট্রাকিয়ারি উপাদান (tracheary elements), যেমন—ট্রাকিড ও ট্রাকিয়া, জাইলেম প্যারেনকাইমা (xylem parenchyma) এবং জাইলেম তন্তু (xylem fibres) নিয়ে জাইলেম কলা গঠিত।

অবস্থান (Occurrence) : একবীজপত্রী ও দ্বিবীজপত্রী উদ্ভিদের মূল, কাণ্ড ও পাতার নালিকা বান্ডিলে (vascular bundles) জাইলেম কলা অবস্থান করে।

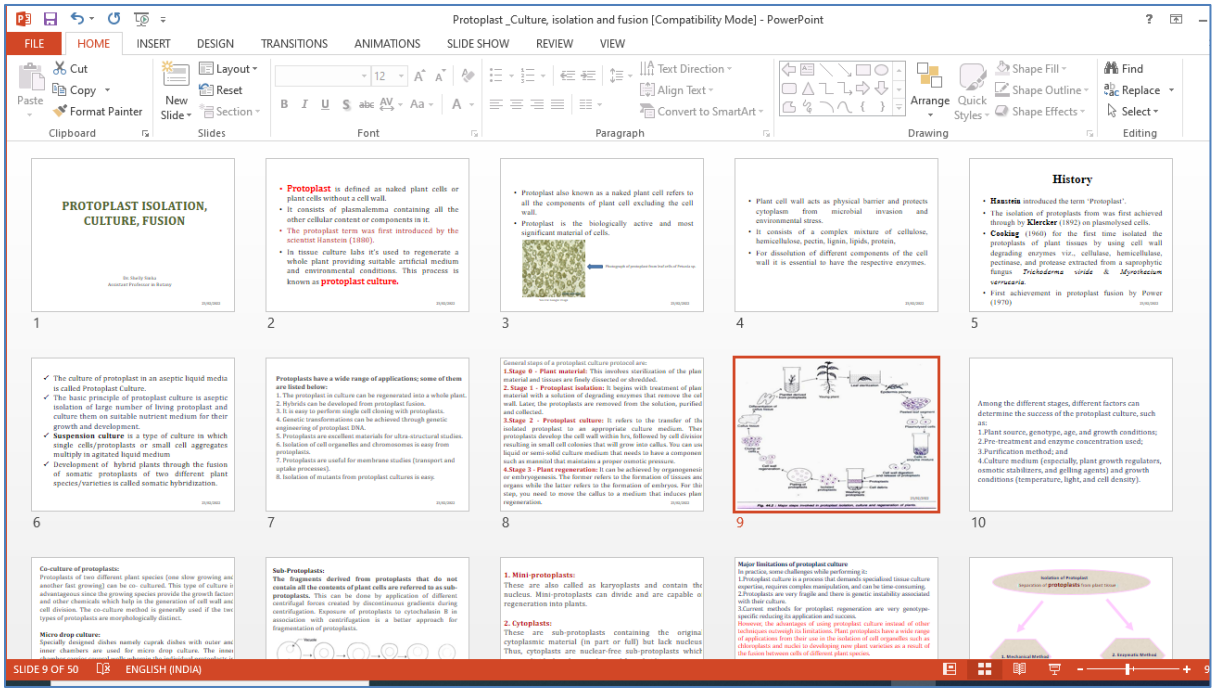
উপাদান (Components) : জাইলেম চার প্রকার সজীব ও মৃত কোশ নিয়ে গঠিত, যথা— (A) ট্রাকিড (tracheid), (B) ট্রাকিয়া (trachea), (C) জাইলেম প্যারেনকাইমা (xylem parenchyma) এবং (D) জাইলেম তন্তু (xylem fibres)।

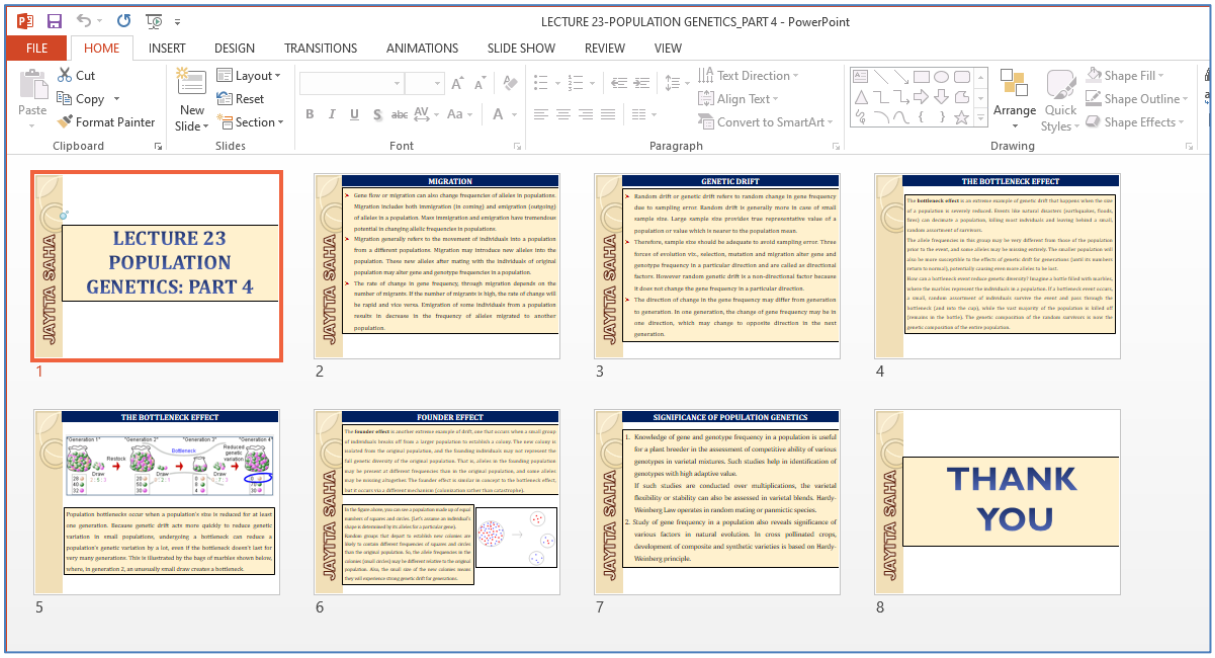
উপরের উপাদানগুলির মধ্যে **ট্রাকিড** (tracheids) এবং জাইলেম বাহিকা (vessel members) অর্থাৎ **ট্রাকিয়া** (trachea) জল ও খনিজ লবণ পরিবহণে সাহায্য করে, সেই কারণে এদের একত্রে **ট্রাকিয়ারি উপাদান** (tracheary elements) বলে।

(A) ট্রাকিড (Tracheid) :

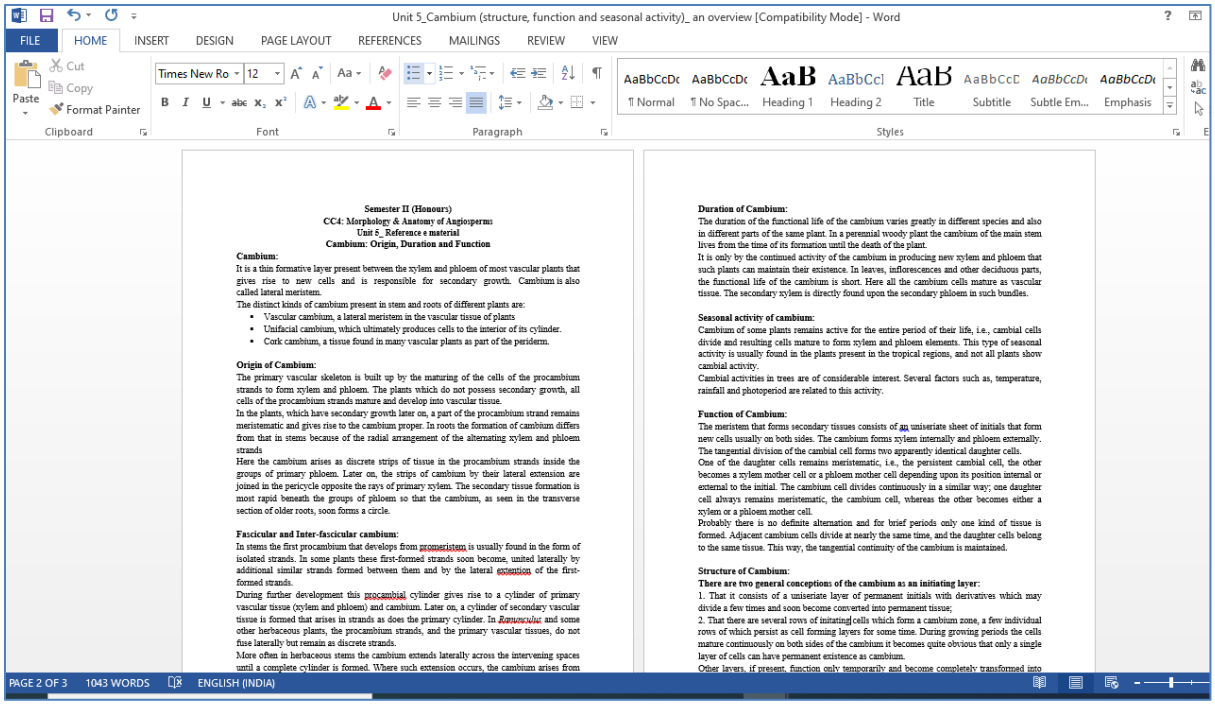
সংজ্ঞা (Definition) : *পুরু কোশপ্রাচীরযুক্ত, লম্বা, ছুঁচোলো প্রান্তবিশিষ্ট মৃত জাইলেম কোশকে ট্রাকিড (tracheid) বলে।*

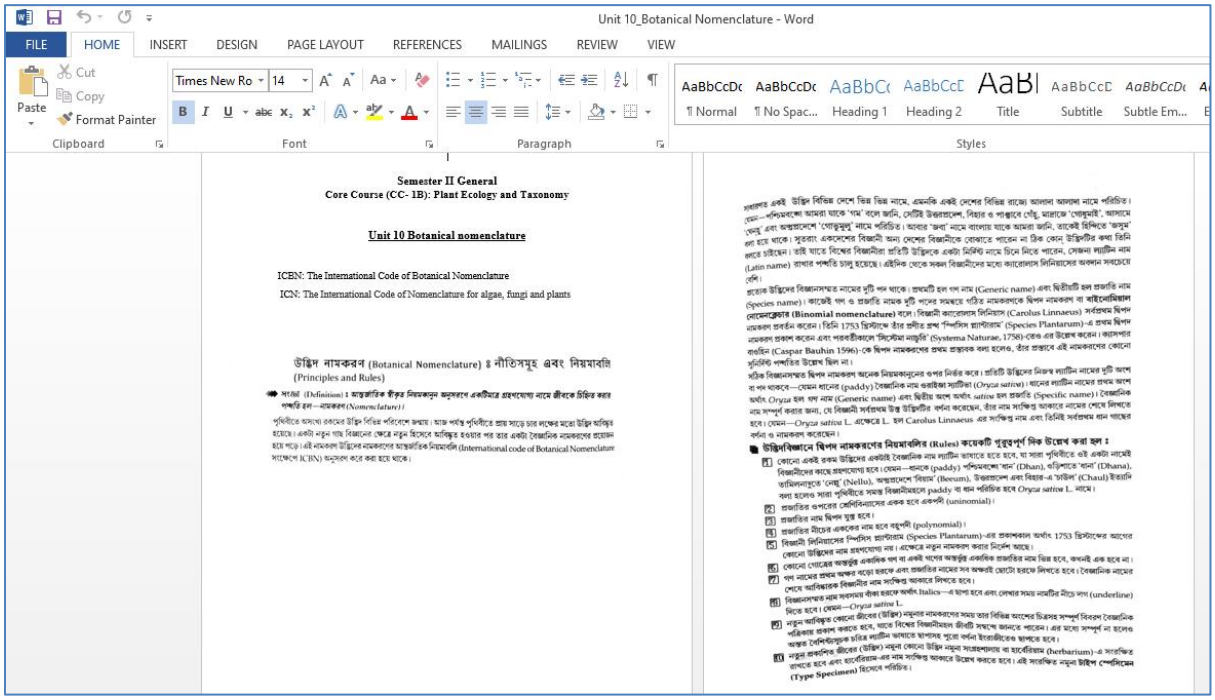
PPT. Sample


Protoplast _Culture, isolation and fusion [Compatibility Mode] - PowerPoint
PROTOPLAST ISOLATION, CULTURE, FUSION
History
SLIDE 9 OF 50
ENGLISH (INDIA)

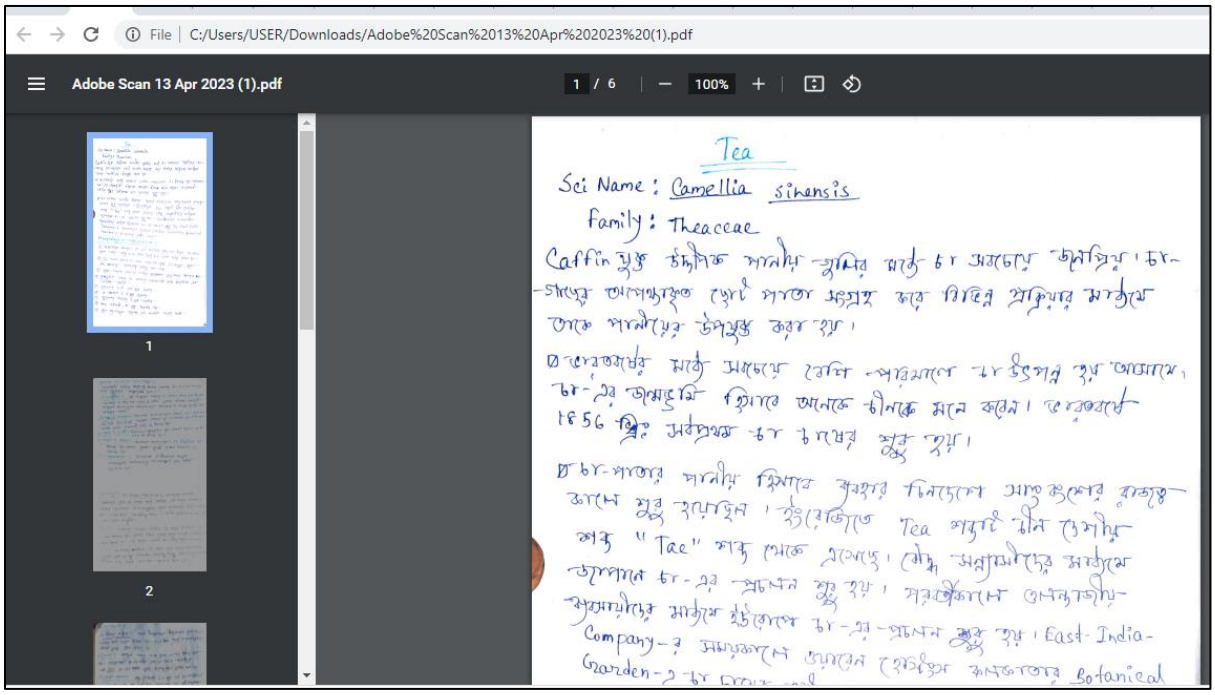

LECTURE 23-POPULATION GENETICS_PART 4 - PowerPoint
LECTURE 23 POPULATION GENETICS: PART 4
JAYITA SAHA
MIGRATION
GENETIC DRIFT
THE BOTTLENECK EFFECT
FOUNDER EFFECT
SIGNIFICANCE OF POPULATION GENETICS
THANK YOU

Word Doc. Sample

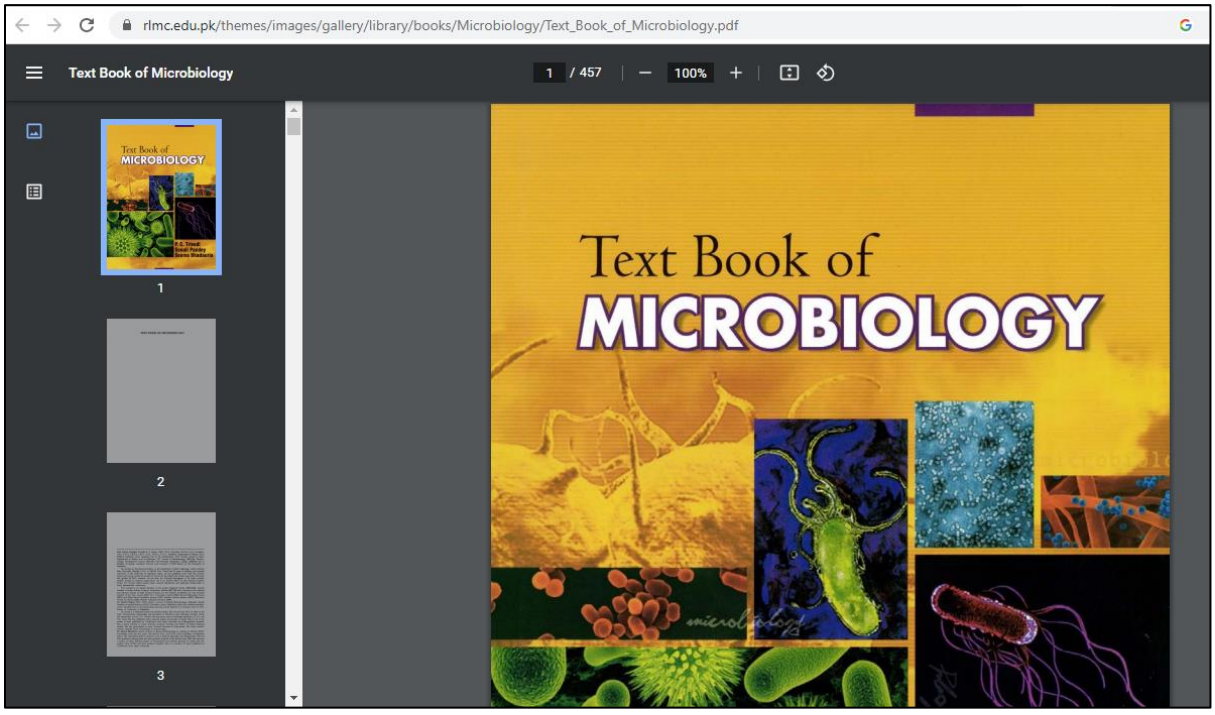




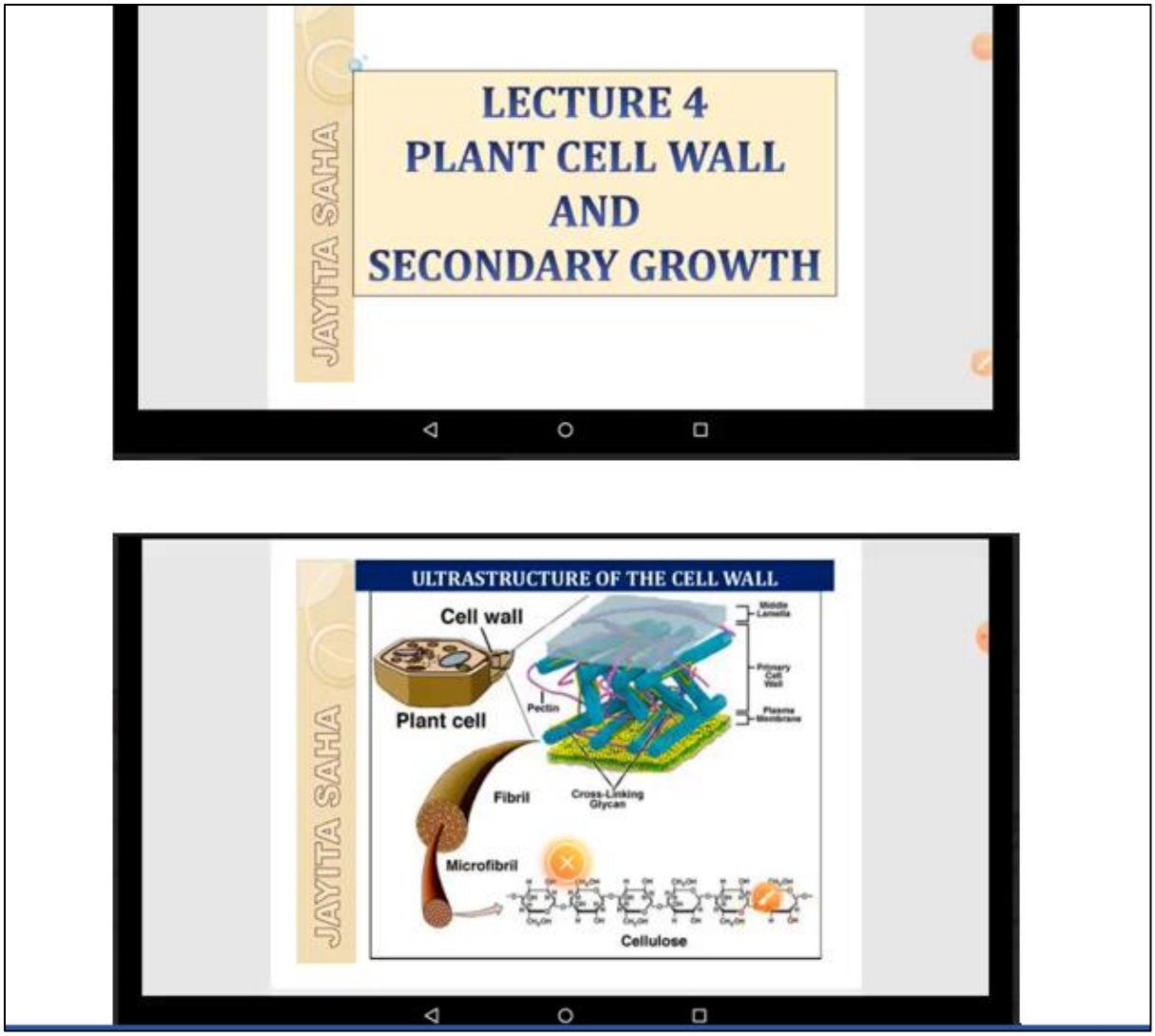
Scanned hand written notes (Sample in Bengali for general stream)



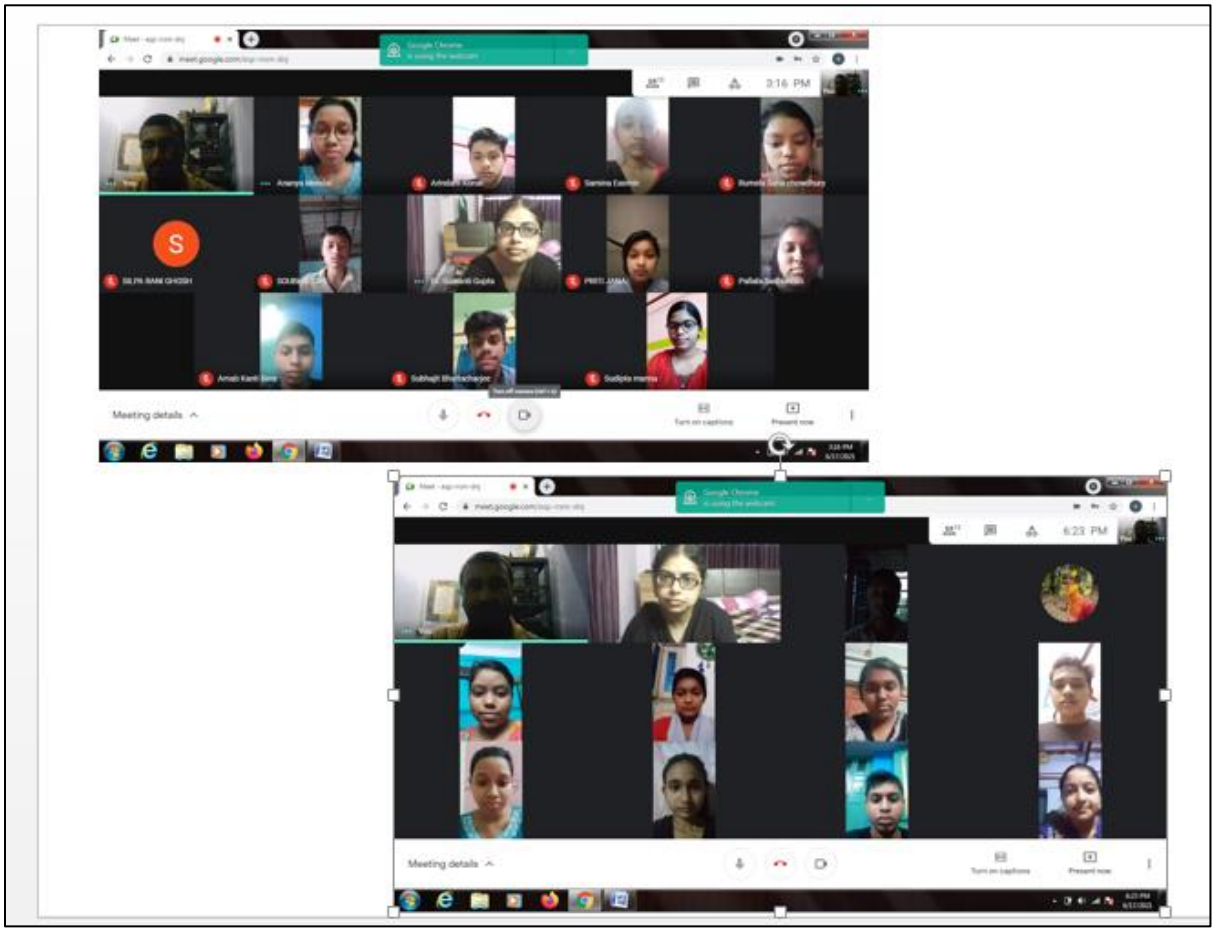
E-Book PDF (Sample)



Screenshot of Video (Sample)



Google Meet

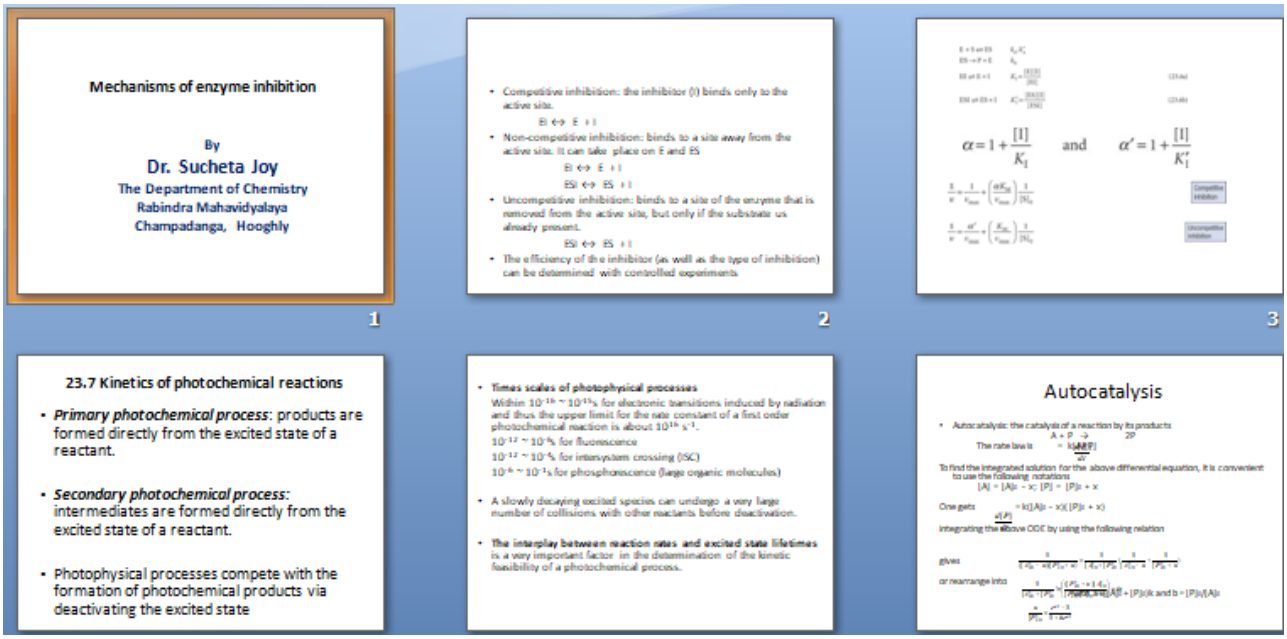


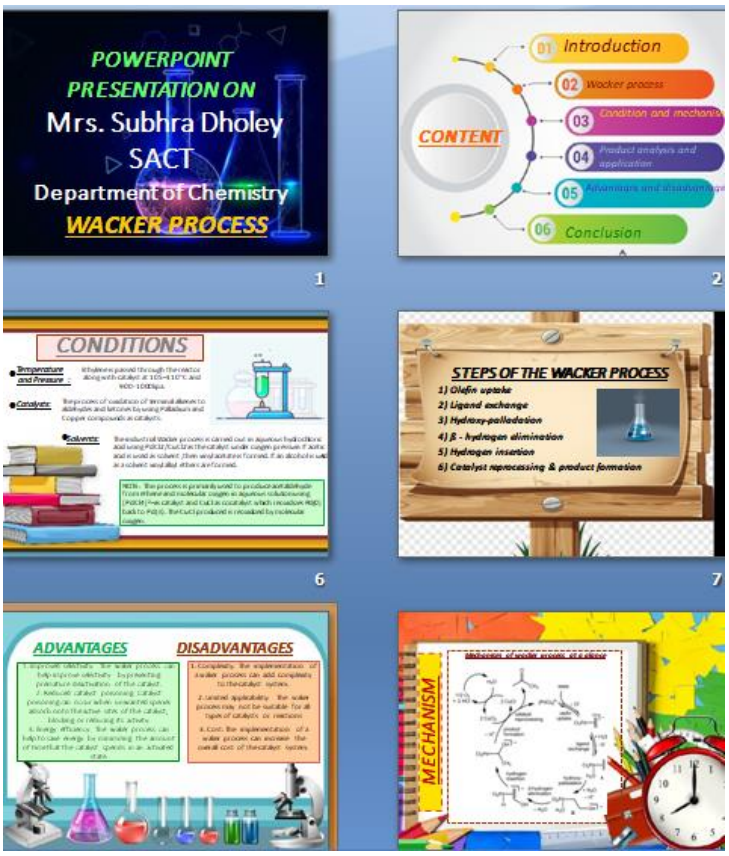
Department of Chemistry (2021-2022)

Snapshots/ screenshots of E-resources and techniques used

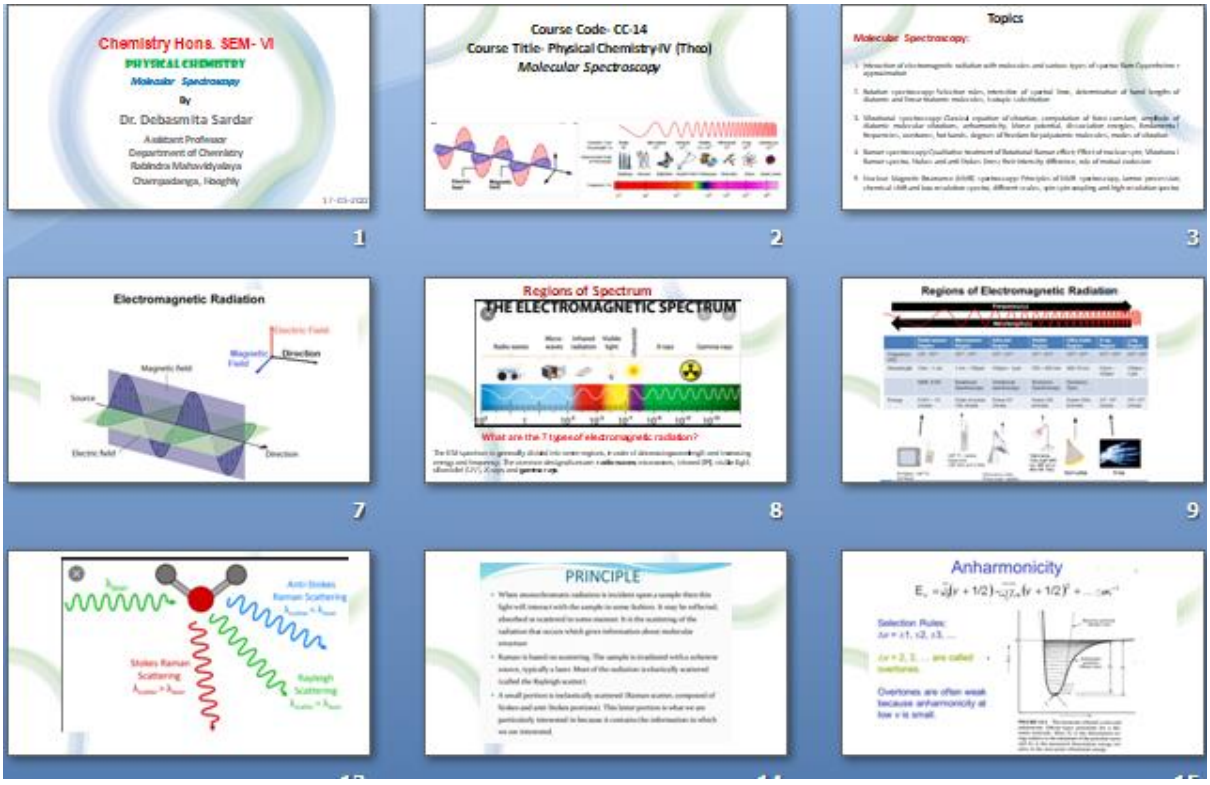
Screenshot (sample) of Resources

PPT Sample



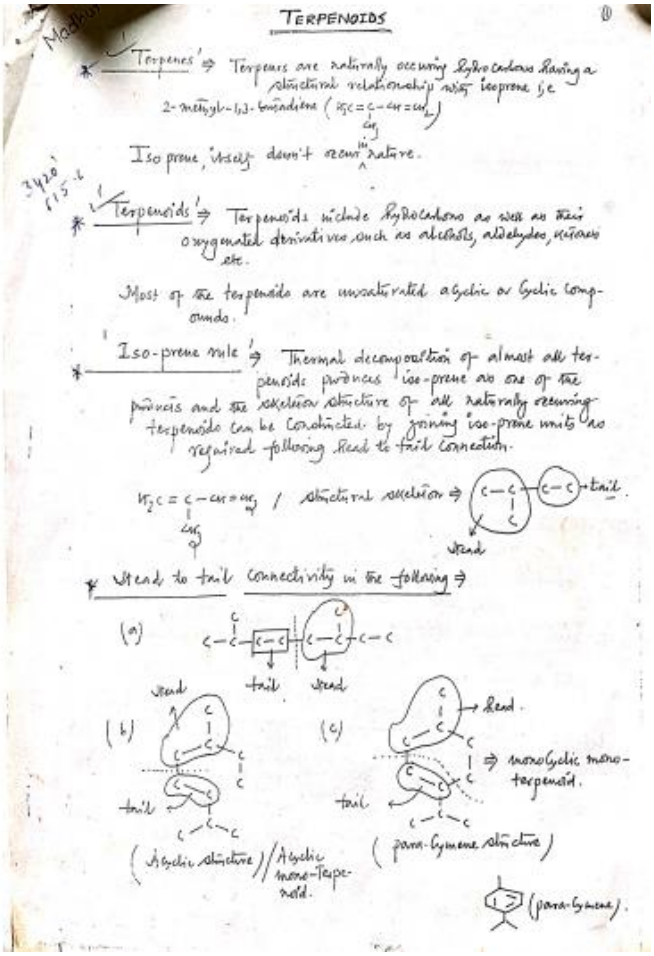

POWERPOINT
PRESENTATION ON
Mrs. Subhra Dholey
SACT
Department of Chemistry
WACKER PROCESS
1
CONTENT
01 Introduction
02 Wacker process
03 Condition and mechanism
04 Product analysis and application
05 Advantages and disadvantages
06 Conclusion
2
CONDITIONS
Temperature and Pressure :
Catalysts:
Solvents:
6
STEPS OF THE WACKER PROCESS
1) Olefin uptake
2) Ligand exchange
3) Hydroxy-palladation
4) β - hydrogen elimination
5) Hydrogen insertion
6) Catalyst reprocessing & product formation
7
ADVANTAGES
DISADVANTAGES
MECHANISM


POWERPOINT PRESENTATION ON
Hydroformylation Reaction
Dr. Rabiul Alam
Assistant Professor
Department of Chemistry
1
CONTENT
2
INTRODUCTION
3
Steps of the hydroformylation
5
Mechanism
6
USES
7
Conclusion
PRODUCTS OF HYDROFORMYLATION REACTION


Chemistry Hons. SEM- VI
PHYSICAL CHEMISTRY
Molecular Spectroscopy
By
Dr. Debasmita Sardar
Assistant Professor
Department of Chemistry
Rabindra Mahavidyalaya
Champadanga, Hooghly
1
Course Code- CC-14
Course Title- Physical Chemistry-IV (Theo)
Molecular Spectroscopy
2
Topics
Molecular Spectroscopy:
3
Electromagnetic Radiation
Magnetic Field
Direction
Source
Electric field
7
Regions of Spectrum
THE ELECTROMAGNETIC SPECTRUM
What are the 7 types of electromagnetic radiation?
8
Regions of Electromagnetic Radiation
9
Anti-Stokes Raman Scattering
Stokes Raman Scattering
Rayleigh Scattering
PRINCIPLE
Anharmonicity
Selection Rules:
Overtones are often weak because anharmonicity at low v is small.
15


POWER POINT PRESENTATION
ON
" WILKINSON'S CATALYST "
Mr. Tanmoy Pandit
SACT
Department of Chemistry
Rabindra Mahavidyalaya
Champadanga , Hooghly
1
OVERVIEW
INTRODUCTION
ORGANOMETALLICS CATALYST
PROPERTIES AND PREPARATION
MECHANISM
STEREOCHEMISTRY
USES
APPLICATIONS
ADVANTAGES AND DISADVANTAGES
ACKNOWLEDGEMENT
2
INTRODUCTION
A catalyst is a substance that affects the rate of a reaction but emerges from the process unchanged.
A catalyst usually changes a reaction rate by promoting a different molecular path (mechanism) for the reaction.
Catalyst affect yield and selectivity.
Changes only the rate of reaction , it does not affect the equilibrium
3
Wilkinson's Catalyst
6
Properties and Preparation
Physical Properties
Chemical Properties
7
MECHANISM
8
USES
APPLICATIONS
ADVANTAGES & DISADVANTAGES
ADVANTAGES
DISADVANTAGES

PDF Sample/ Books



TERPENOIDS

1

* Terpenes ⇒ Terpenes are naturally occuring hydrocarbons having a structural relationship with isoprene i.e 2-methyl-1,3-butadiene ($H_2C=C(CH_3)-CH=CH_2$)

Isoprene, itself doesn't occur in nature.

* Terpenoids ⇒ Terpenoids include hydrocarbons as well as their oxygenated derivatives such as alcohols, aldehydes, ketones etc.

Most of the terpenoids are unsaturated acyclic or cyclic compounds.

* Iso-prene rule ⇒ Thermal decomposition of almost all terpenoids produces iso-prene as one of the products and the skeleton structure of all naturally occuring terpenoids can be constructed by joining iso-prene units as required following head to tail connection.

$H_2C=C(CH_3)-CH=CH_2$ / structural skeleton ⇒ c-c(-c)-c-c + tail.

head

* Head to tail connectivity in the following ⇒

(a) c-c-c(-c)-c-c-c

tail head

(b) head, tail

(Acyclic structure) // Acyclic mono-Terpenoid.

(c) head. ⇒ monocyclic mono-terpenoid.

tail

(para-Cymene structure)

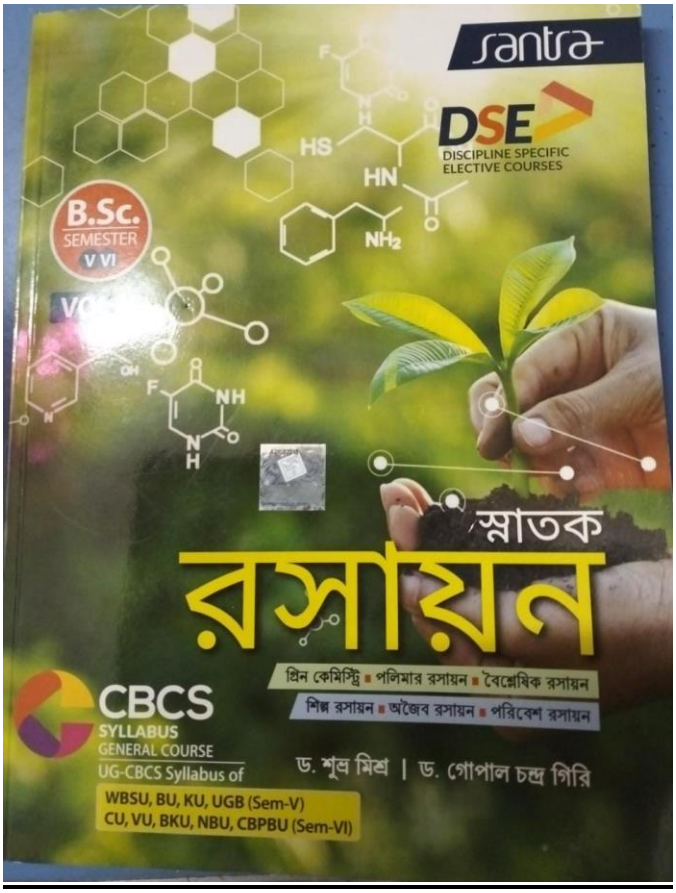
(para-Cymene).

Biocatalysis for Green Chemistry and Chemical Process Development

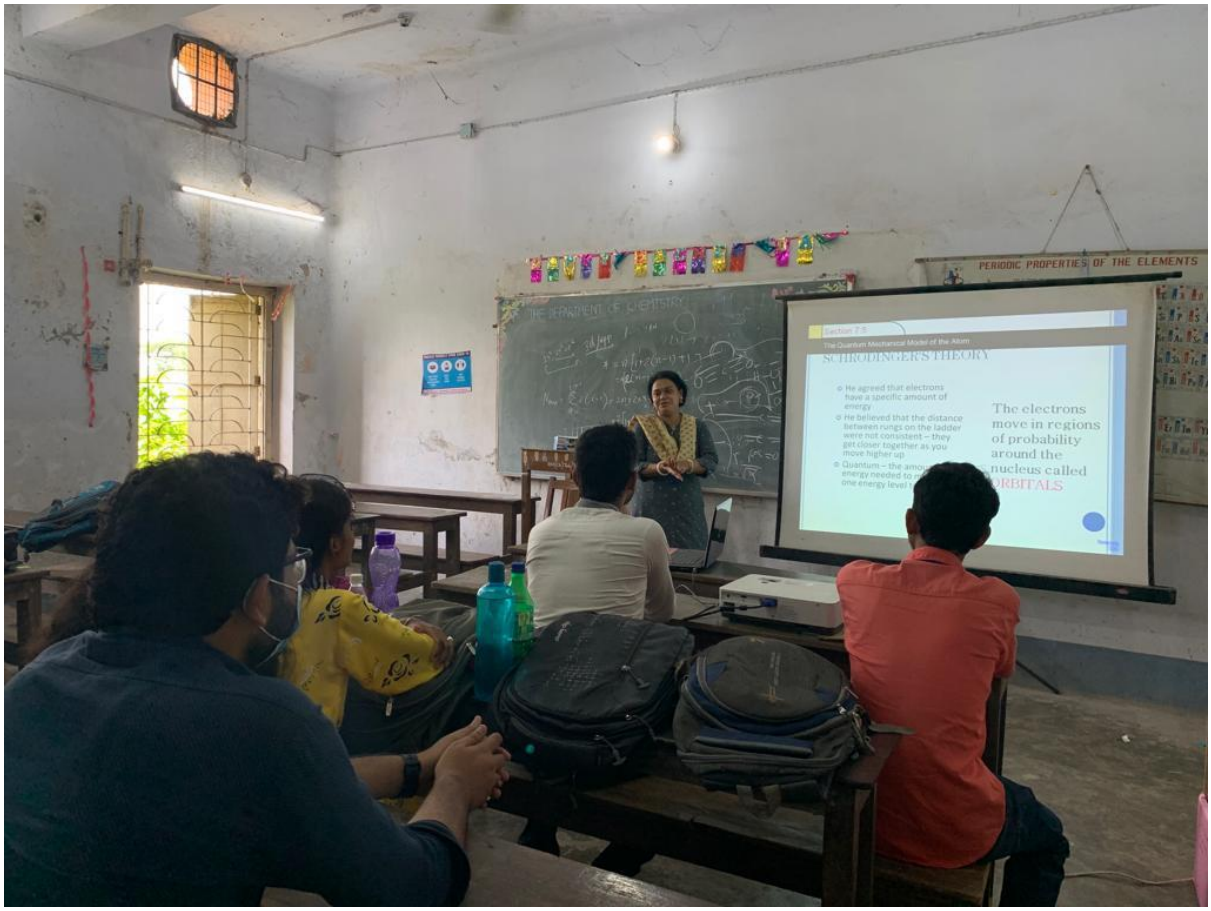
Edited by
Junhua (Alex) Tao
Romas Kazlauskas

WILEY

Bengali book for general students

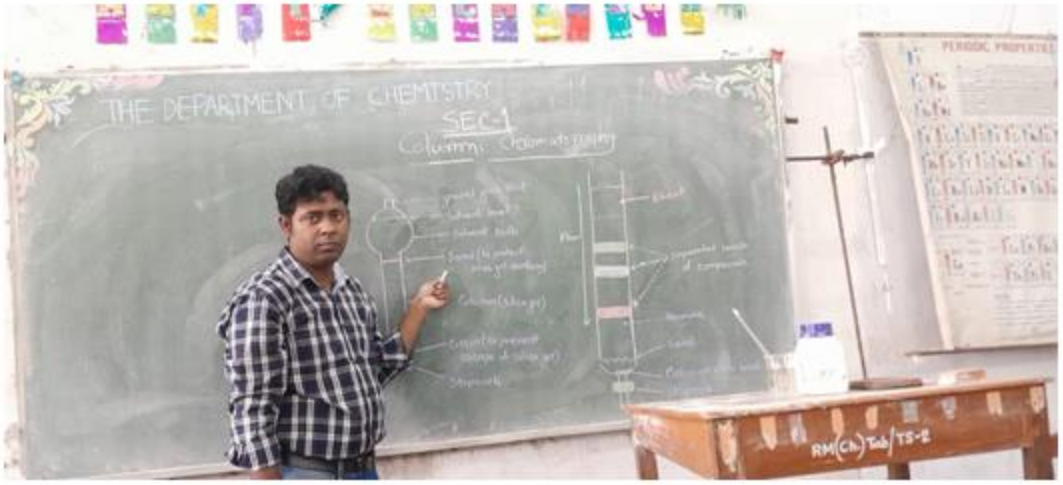


ICT Classes

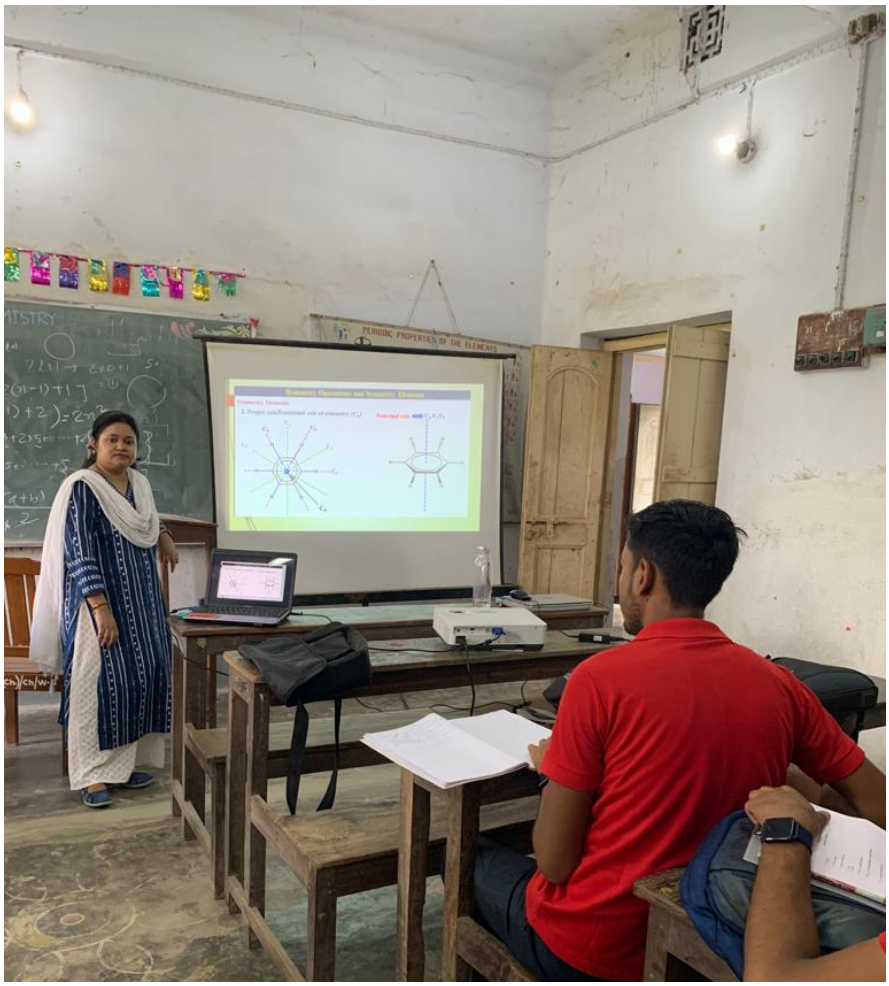


Class taken by Dr. Sucheta Joy, Assistant Professor, department of Chemistry

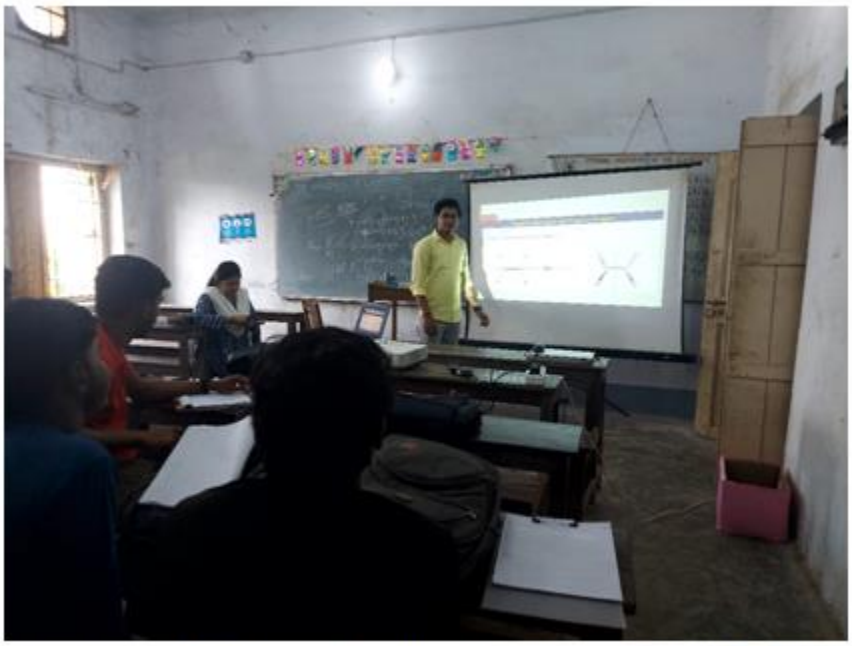

PERIODIC PROPERTIES OF THE ELEMENTS
COLUMN CHROMATOGRAPHY
Column Chromatography was developed by the American chemist D.T Day in 1900. M.S. Tswett,the Polish botanist, in 1906 used adsorption columns in his investigations of plant pigments.



Class taken by Dr. Rabiul Alam, Assistant Professor, department of Chemistry



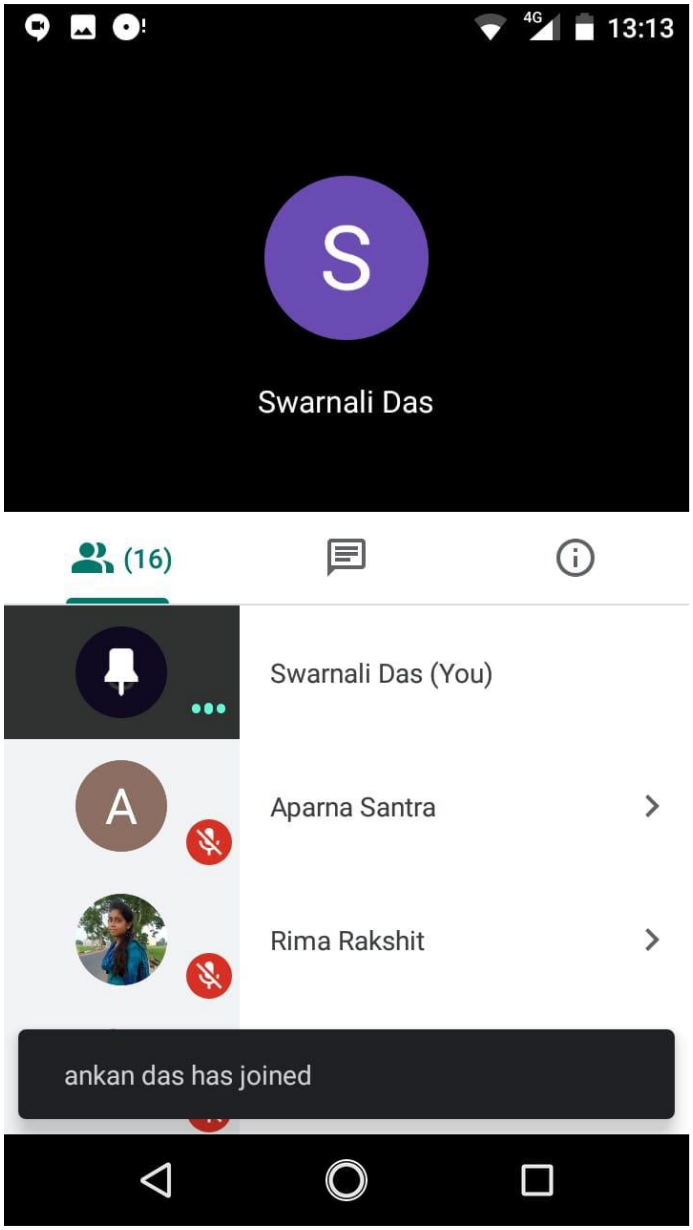
Class taken by Dr. Debasmita Sardar, Assistant Professor, department of Chemistry



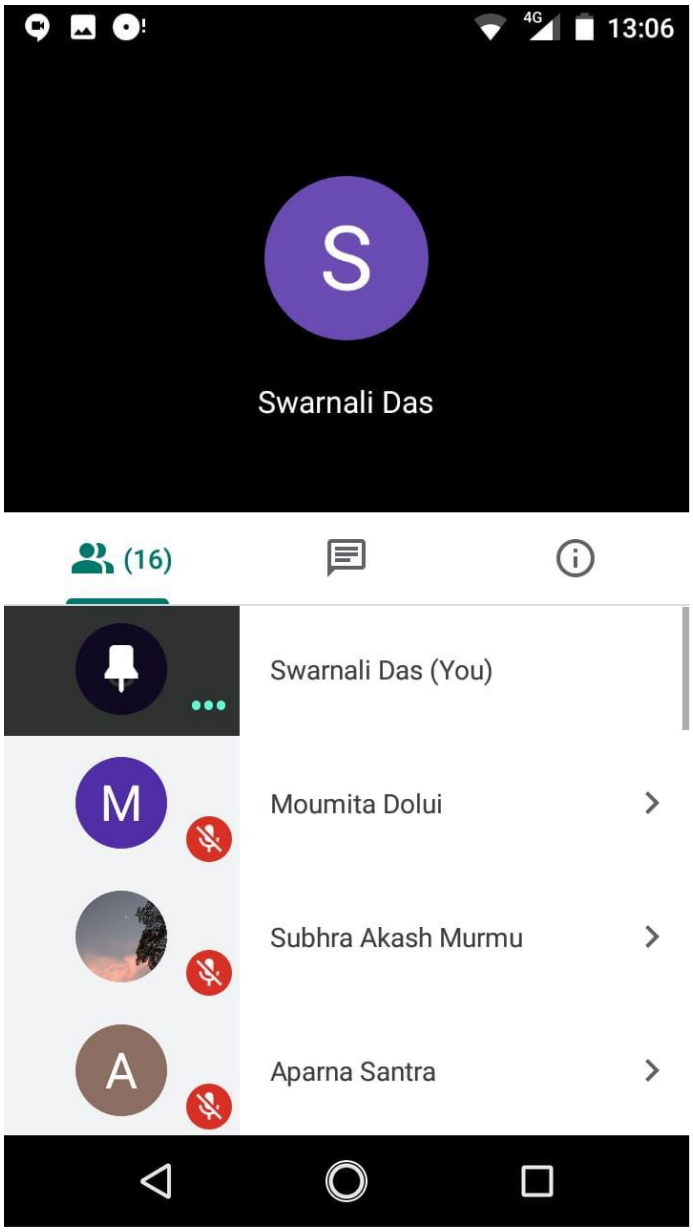
Class taken by Mr. Tanmoy Pandit, SACT, department of Chemistry

Class taken by Mrs. Subhra Dholey, SACT, department of Chemistry

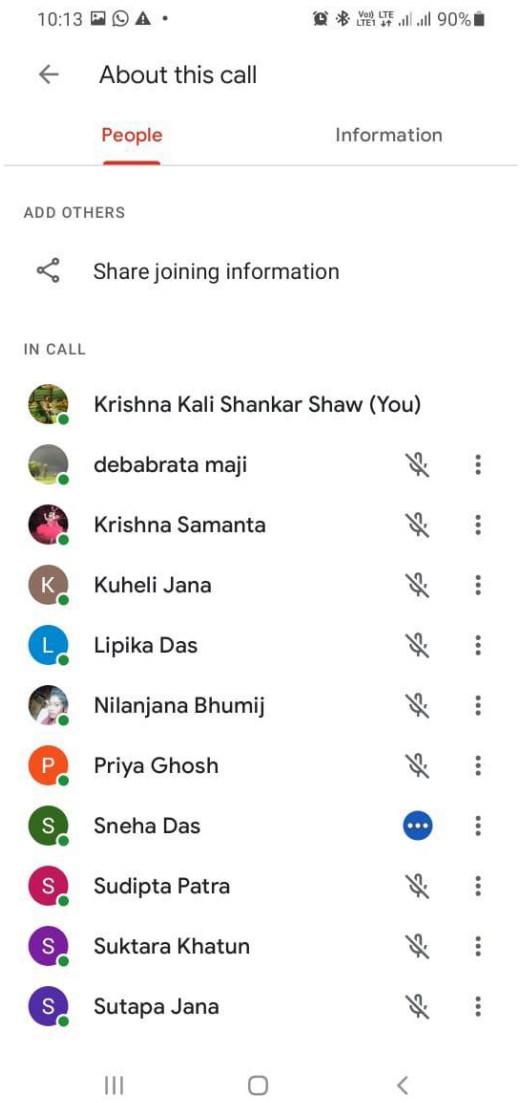
Department of Political Science



Online class taken by Swarnali Das (SACT) for 4 th sem generic



Online class taken by Swarnali Das SACT for Sem-6 Generic

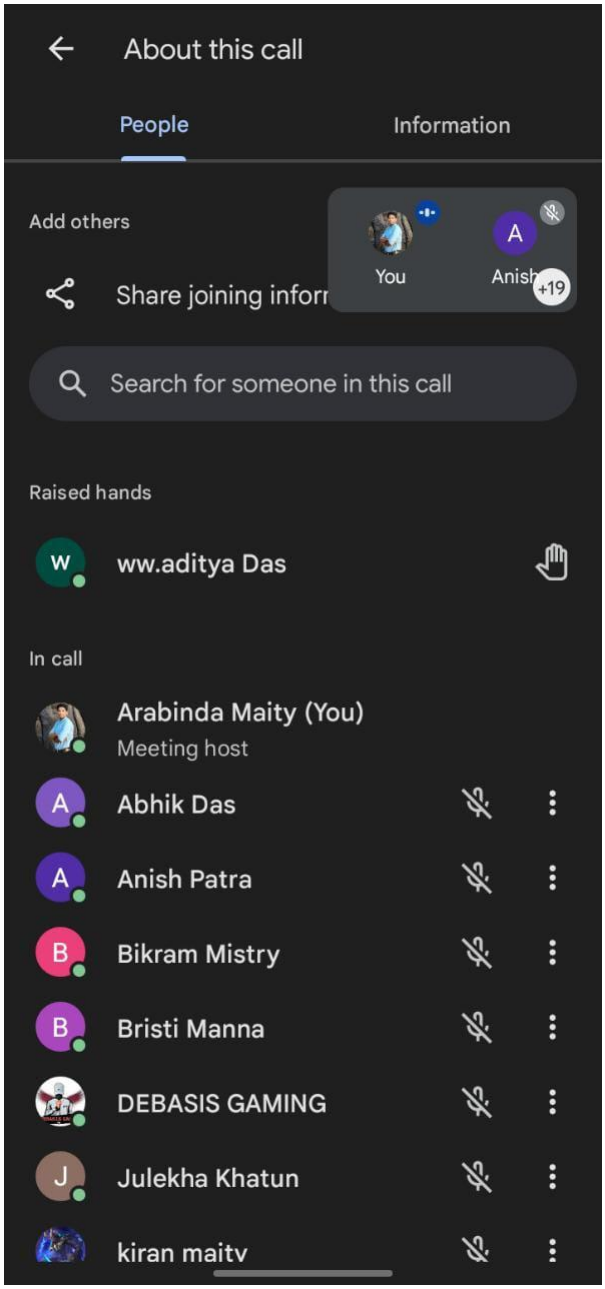


Online Class taken by Mr. Krishna Kali Mondal Asst. Prof in Pol. Sc for 2 nd Sem Honours

DEPARTMENT OF PHYSICAL EDUCATION (SESSION 2021-2022)

ONLINE CLASS - SEMESTER-1

CLASS TAKEN BY MR. ARABINDA MAITY , SACT, PHYSICAL EDUCATION



Rests of the departments also have followed the similar techniques to conduct classes and evaluate student performance. (Screenshots are not attached.)