



ICT Tools and E-resources

ICT-Enabled Tools and E- Resources for Effective Teaching-Learning Process

Embracing a holistic approach to education, the institution has innovatively tailored methods to cater to student needs, fostering increased satisfaction and performance. Dedicated to exploring diverse aspects like multidisciplinary, multilingualism, eco-friendliness, nationalism, humane values, and life skills, the institution integrates the use of ICT Tools into the curriculum. This involves applied research in science and a broad critical perspective in the arts, emphasizing indigenous art and aesthetics. In the era of the technological revolution, the institution consistently adapts course delivery to align with evolving trends in information and technology. The Covid era underscored the positive impact of ICT-enabled tools, preventing an education standstill. Although a return to offline campus life occurred in 2022, online platforms like G-SUITE, Zoom, YouTube Channels and G-Classroom persist for swift communication, note distribution, and mentoring. The e library facility enables the students to access multifarious e-resources under a single roof.

Key points:

- Both students and educators have made significant strides in embracing technology-driven teaching and learning.
- Platforms like MOODLE, LMS and SWAYAM are not only relied upon but recommended for an enriched educational experience.
- Guidance is provided to students on effectively utilizing electronic resources, including e-books, journals, JSTOR, and INFLIBNET.
- The college library has been completely automated.
- Students benefit from features like the E-Catalogue, Book Status Update System, and archiving services in the library.



Analytical Tools

gretl



Creative Tools



Research Tools



E-Resources



Consortium of Educational Communication

Content Delivery Tools

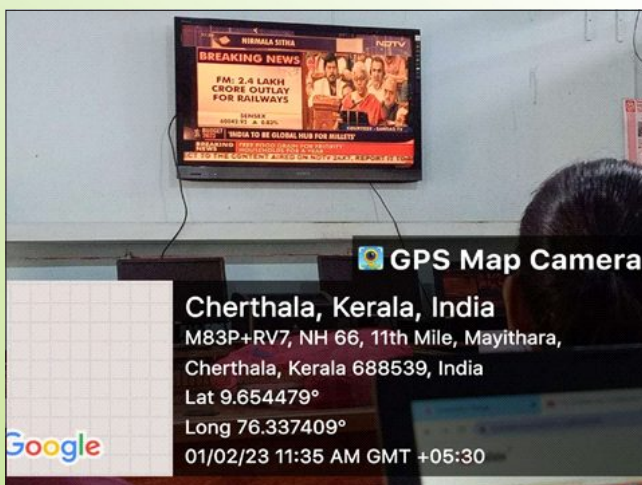
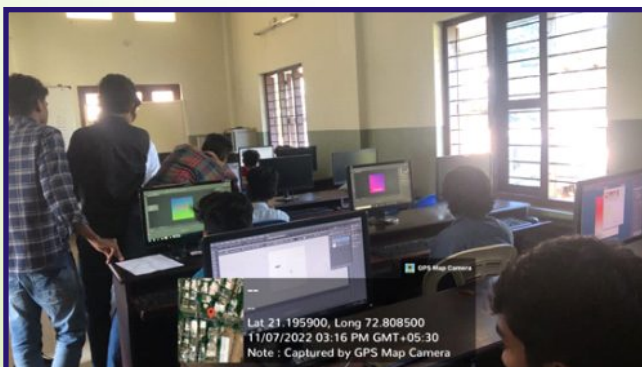




Type fest using MS Word, conducted as part of IT fe



Logo designing using Adobe Photoshop, conducted as part of IT fest



Year	No. of classrooms with LCD facility	WiFi /LAN	No. of Seminar halls with ICT facility
2017 – 18	5	5	1
2018 – 19	5	5	1
2019-20	5	2	1
2020-21	5	2	1
2021-22	5	2	1
2022-23	5	2	1



Organometallic Compounds Lecture 1 [Protected View] - PowerPoint Betty Eapen

File Home Insert Draw Design Transitions Animations Slide Show Record Review View Help Tell me Present in Teams

5
6
7
8
9
10

Easy way to remember ligand electron contribution for neutral atom counting method

Electron contribution

Neutral terminal	: CO, PR ₃ , NR ₃	2 electrons
Anionic terminal	: X ⁻ , H ⁻ , R ⁻ , Ar ⁻ , R ₂ N ⁻ , R ₂ P ⁻ , RO ⁻	1 electron
Hapto ligands	: η ² -C ₂ R ₄ , η ² -C ₂ R ₂ , η ⁴ -C ₂ R ₂ , η ¹ -allyl, η ¹ -allyl, η ⁴ -Cb, η ⁵ -Cp, η ⁶ -C ₆ H ₆ , η ² -C ₂ H ₂ , η ⁶ -C ₆ H ₆ , η ² -C ₆₀ , η ⁵ -R ₅ C ₆₀	same as hapticity
bridging neutral	μ ₂ -CO, μ ₃ -CO	2 electrons
Bridging anionic	μ ₂ -CH ₃ , μ ₂ -H (no lone pairs)	1 electron
Bridging anionic (with 1 lone pair)	μ ₂ -Cl ₂ , μ ₂ -OR ₂ , μ ₂ -PR ₂ , μ ₂ -NR ₂	3 electrons
μ ₃ -Cl (2 l.p)		5 electrons
Bridging alkyne		4 electrons
NO linear		3 electrons
NO bent (l.p on nitrogen)		1 electron
Carbene M=C		2 electron
Carbyne M≡C		3 electron

Slide 6 of 10 English (India) Notes Comments 66%

File Home Insert Draw Design Transitions Animations Slide Show Record Review View Help Tell me Present in Teams

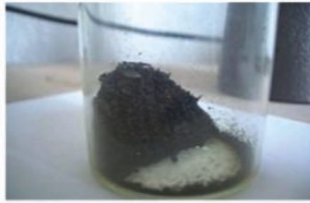
1
2
3
4
5
6
7

Dibenzene chromium

Properties	
Chemical formula	C ₁₂ H ₁₂ Cr
Molar mass	208.22 g/mol
Appearance	brown-black crystals
Melting point	284 to 285 °C (543 to 545 °F; 557 to 558 K)
Boiling point	sublimes: 160 °C (320 °F; 433 K) in vacuo
Solubility in water	insoluble
Solubility in other solvents	slightly; benzene, THF

Structure

Coordination	pseudooctahedral
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Slide 2 of 15 English (India) Notes Comments 62%

Isolobal Species

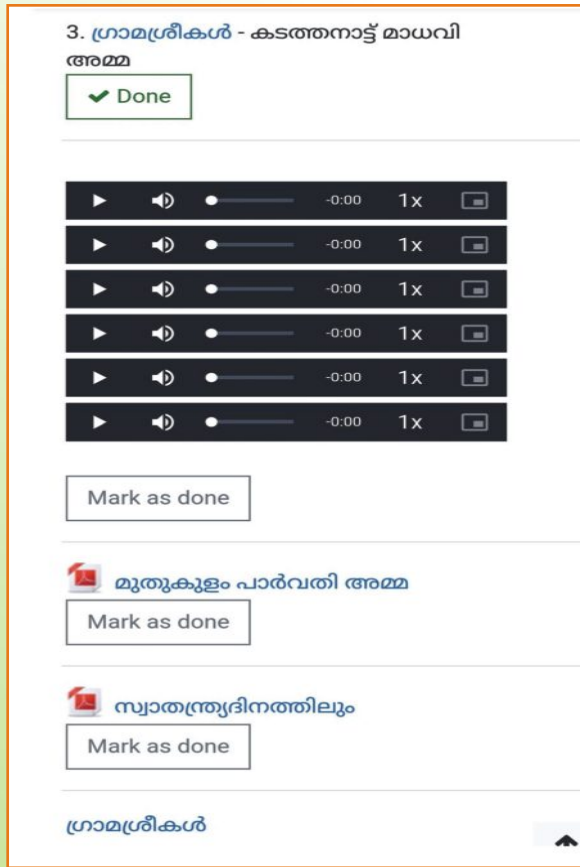
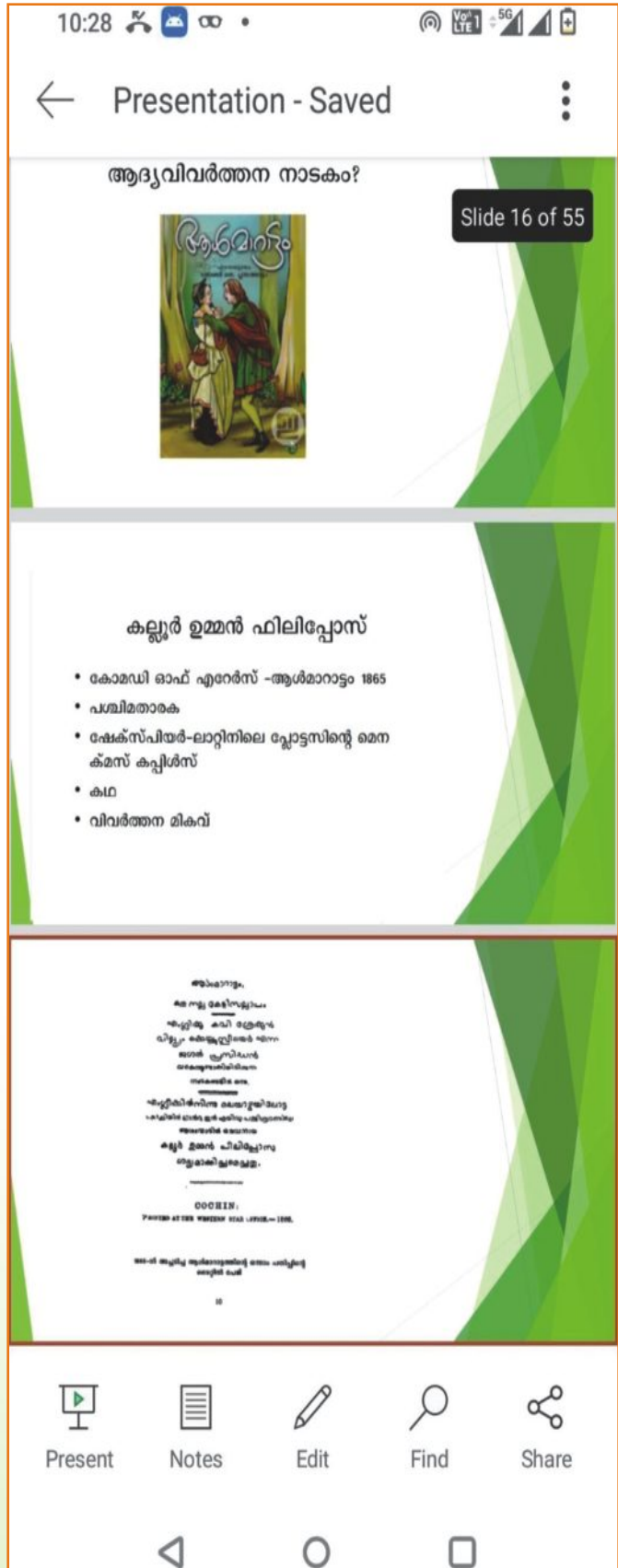
If two sets of frontier orbitals belonging to two different molecular fragments are same in number, symmetry and shapes, the two molecular fragments are called isolobal fragments.

Two fragments are called isolobal if their frontier orbitals are same in number, have same symmetry, are of approximately same energy and have same number of electrons on them.

These isolobal fragments can replace each other in complexes.



Classes using PowerPoint presentations





Department of Chemistry

The image shows two screenshots of Google Slides presentations. The top presentation is titled "Organometallics 7" and the bottom presentation is titled "Organometallics 2".

Organometallics 7

Slide 1: Title slide with the text "Organometallics 7" and a placeholder "Click to add subtitle".

Organometallics 2

Slide 1: Title slide with the text "Isoelectronic Compounds".

Slide 2: Content slide with the text "Have same number of valence electrons".

Slide 3: Chemical reaction showing the formation of an isoelectronic complex:

$$\text{Fe}_3(\text{CO})_{12} \xrightarrow{\text{Na}} [\text{Fe}(\text{CO})_4]^{2-}$$

Below the reaction, it states: $8 + 8 + 2 = 18$ electron.

Slide 4: Text stating: $[\text{Fe}(\text{CO})_4]^{2-}$ is isoelectronic with $\text{Ni}(\text{CO})_4$.



Department of Economics





Department of Commerce

The screenshot shows a Google Classroom interface with three assignment sections:

- Internal Reconstruction**: Assignment No:1, Due Jul 25, 2022, 9:30 AM.
- Insurance Claims**: Assignment No: 2, Due Dec 31, 2021; Assignment No 1, Due Dec 30, 2021.
- Voyage Accounts**: Assignment 2-Voyage Accounts, Due Nov 23, 2021.

Below the assignments is the Google Classroom navigation bar with 'To review' and 'Calendar' tabs. A grid of class cards is visible, including 'M.Com 2022 Admissions', 'M.Com 2021 Admissions', 'M.Com 2020 Admissions', 'M.Com 2019 Admissions', 'B.Com 2021 Admissions', 'B.Com 2020 Admissions', 'B.Com 2019 Admissions', and 'B.Com- 2018 Admissions'.

The screenshot shows the 'M.Com 2020 Admissions' class stream with the following posts:

- SMC COMMERCE CLASS** (Jan 23, 2022):
 - Post: Marginal Costing Part I & II <https://online.fliphtml5.com/udixo/twdk/>
 - Post: <https://online.fliphtml5.com/udixo/lqiy/>
 - Attachments: Marginal Costing 1 (<https://online.fliphtml5.com/udix>), Marginal Costing 2 (<https://online.fliphtml5.com/udix>)
 - Input field: Add class comment...
- SMC COMMERCE CLASS** (Dec 8, 2021):
 - Post: SPSS Notes
 - Attachment: SPSS.pptx (PowerPoint)



8. Power Point Presentations

Criteria For Equilibrium and Spontaneity

The Direction of Spontaneous Change
If the energy of a system does happen to decrease during the spontaneous change, the energy of its surrounding must increase by the same amount (by first law)
The increase in energy of the surrounding is just same as the decrease in energy of the system in spontaneous process.

The Dispersal of Energy

- Spontaneous changes are always accompanied by a dispersal of energy.
- During a spontaneous change in an isolated system the total energy is dispersed into random thermal motion of the particles in the system.

The direction of spontaneous change for a ball bouncing on a floor. On each bounce some of its energy is degraded into the thermal motion of the atoms of the floor, and that energy disperses.

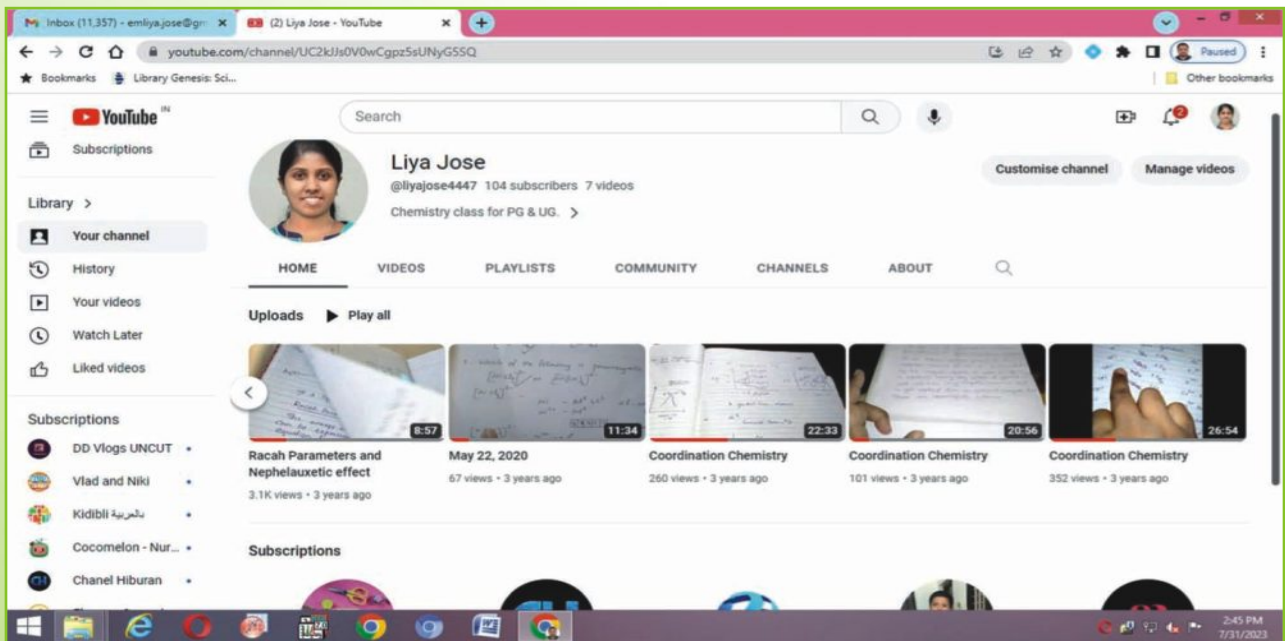
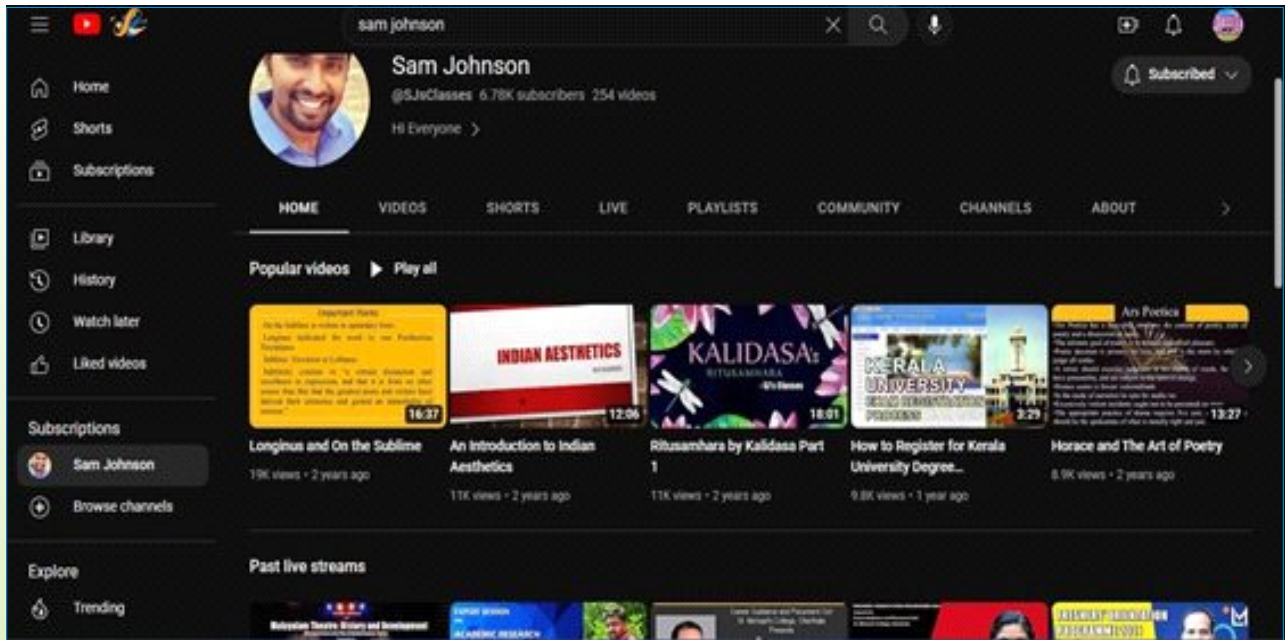
Department of Chemistry, St. Michael's College, Cherthala

Basis Set

- A basis set is a set of mathematical functions used to describe the shape of orbitals in an atom.
- MO's and entire wave functions are created by taking linear combinations of basis functions.
- Usually these functions are centered on atoms, but functions centered in bonds or lone pairs have been used.
- Quantum chemical calculations are typically performed within a finite set of basis functions.
- These basis functions are usually not the exact atomic orbitals, like the hydrogen atom eigenfunctions

30°C
Partly sunny

2:40 PM
2023-05-20





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Version: JASP 0.16.1
Built on: Feb 15 2022 18:02:05 (Netherlands)
Source: [Access the sources here](#)
Download: <https://jasp-stats.org/download/>
Citation: JASP Team (2022). JASP (Version 0.16.1) [Computer software]. [RiBTeX](#)

JASP

This program is provided AS IS with NO WARRANTY OF ANY KIND, INCLUDING THE WARRANTY OF DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Impact of COVID (D:\GURU\MA Project\Akshay\Analysis)

Descriptives T-Tests ANOVA Mixed Models Regression Frequencies Factor

	Size_Household	Type_Household	Income_Level	Expenditure	Savings_Level	Trq
1	4	Both Organised	Strongly Agree	Disagree	Strongly Disagree	Agree
2	5	Both Organised	Strongly Agree	Strongly Disagree	Strongly Disagree	Neither Agree Nor Dis
3	5	Both Organised	Agree	Strongly Disagree	Neither Agree Nor Disagree	Strongly Agree
4	2	Both Organised	Strongly Agree	Agree	Agree	Agree
5	3	Both Organised	Strongly Agree	Disagree	Neither Agree Nor Disagree	Agree
6	4	Both Organised	Strongly Agree	Disagree	Agree	Agree
7	3	Both Organised	Strongly Agree	Disagree	Agree	Agree
8	2	Both Organised	Strongly Agree	Disagree	Agree	Agree
9	4	Both Organised	Strongly Agree	Disagree	Agree	Agree
10	4	Both Organised	Strongly Agree	Disagree	Agree	Agree
11	4	Both Organised	Strongly Agree	Strongly Disagree	Strongly Disagree	Strongly Agree
12	5	Both Organised	Strongly Agree	Agree	Agree	Neither Agree Nor Dis
13	7	Both Organised	Agree	Neither Agree Nor Disagree	Neither Agree Nor Disagree	Strongly Agree
14	3	Both Organised	Neither Agree Nor Disagree	Neither Agree Nor Disagree	Agree	Neither Agree Nor Dis
15	4	Both Organised	Strongly Agree	Disagree	Agree	Strongly Agree
16	3	Both Organised	Strongly Agree	Neither Agree Nor Disagree	Agree	Agree
17	5	Both Organised	Strongly Agree	Disagree	Disagree	Strongly Agree
18	6	Both Organised	Strongly Agree	Disagree	Disagree	Agree

Impact of COVID* (D:\GURU\MA Project\Akshay\Analysis)

Descriptives T-Tests ANOVA Mixed Models Regression Frequencies Factor

ANOVA

Dependent Variable: Size_Household

Fixed Factors: Expenditure

WLS Weights

Results

ANOVA

ANOVA - Size_Household

	Cases	Sum of Squares	df	Mean Square	F	p
Expenditure		4.229	4	1.057	0.695	0.568
Residuals		106.438	70	1.521		

Note. Type III Sum of Squares

Display: Descriptive statistics Estimates of effect size



St. Michael's College, Cherthala

St. Michael's College, Cherthala

Michael's e-Learning Space

Available courses

- Plastic Electronics**
Category: BSc Chemistry
Teacher: Dr. Manoj Parameswaran
- Banking & Finance**
Category: BA Economics
Teacher: Lt. Abin Albert T
- Mathematics for Economics I**
Category: BA Economics
Teacher: Dr. Smisha M A

St. Michael's College, Cherthala
Faculty Profiles
A Library Initiative

HOME LOGIN

All Search for...

Faculty / Scientist

31

- Head of the Department: 1
- Associate Professor: 2
- Assistant Professor: 19
- Lecturer: 1

Scholarly Resources

Publications: 33 Patents: 1

6 Closed Access 1 Green OA

- Journal Articles: 16
- Conference / In Proceedings: 16

Resources Impact

Impact

297 Citations 12 Citations

Department of Physics (2)

Department of Psychology (1)

Department of Statistics (1)

Department of Vocational Disciplines (5)

Department of Zoology (1)

45 Publications 3 Projects 125 Citations 516

Ms Beena James
Assistant Professor

10 Publications 1 Projects 12 Citations

Author: Mathew M., Sreedhanya S., Manoj P., Aravindakumar C.T., Aravind U.K.
91 Citation

An organic redox mediator for dye-sensitized solar...

Author: Liu Y., Jennings J.R., Parameswaran M., Wang Q.

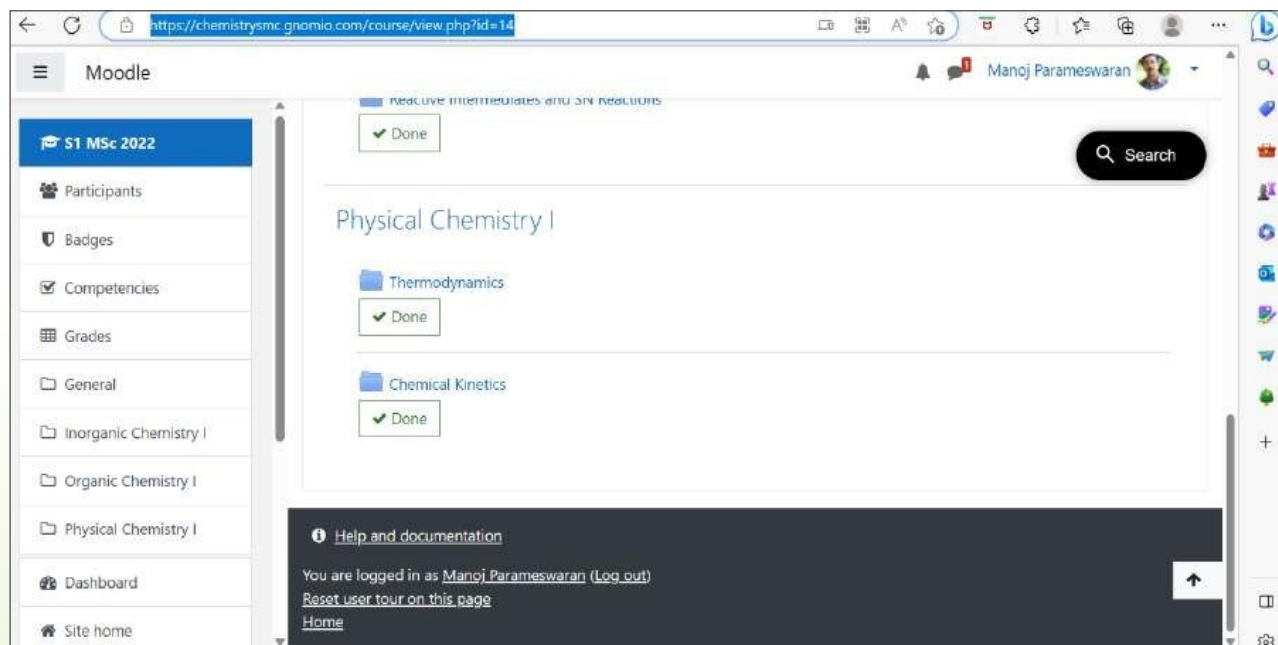
h-index

Department	Publications (approx)	h-index (approx)
Physics	20	4.5
Psychology	30	6.5
Statistics	10	4.0
Vocational Disciplines	150	6.0
Zoology	1	1.5

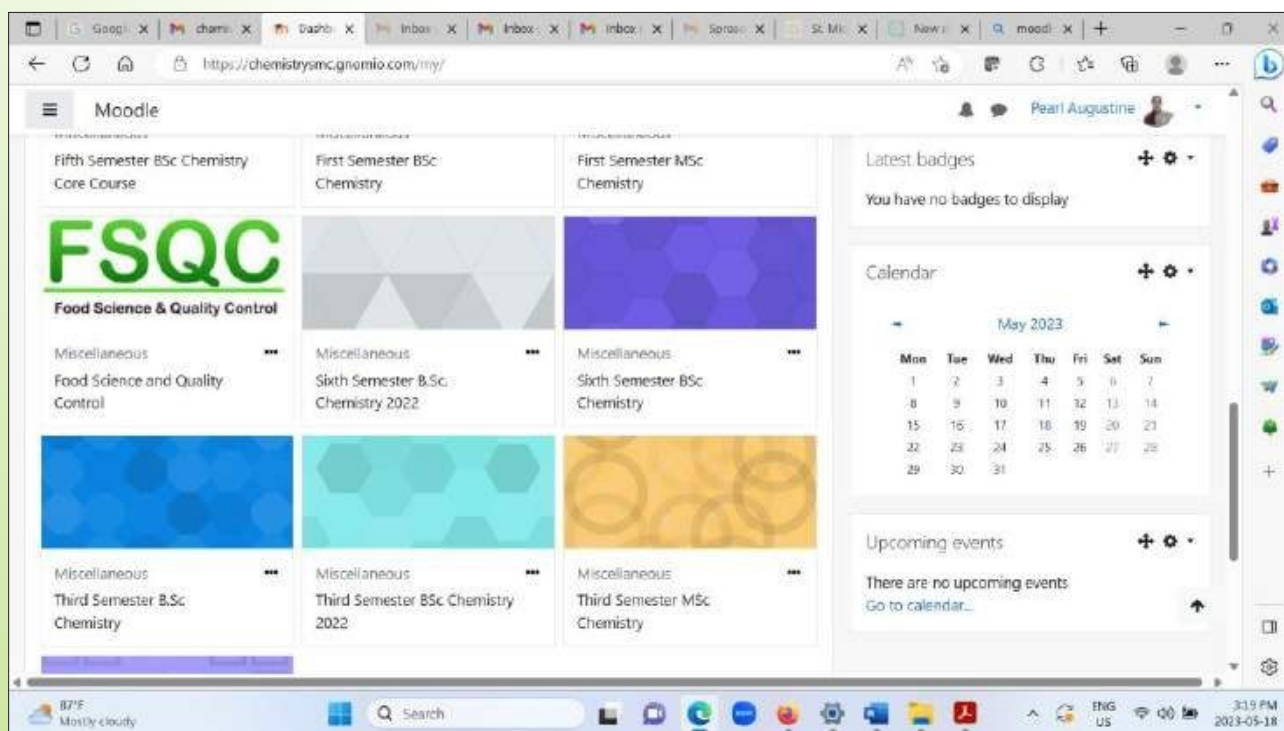


Moodle (gnomio.com)

Course: First Semester MSc Chemistry (gnomio.com)



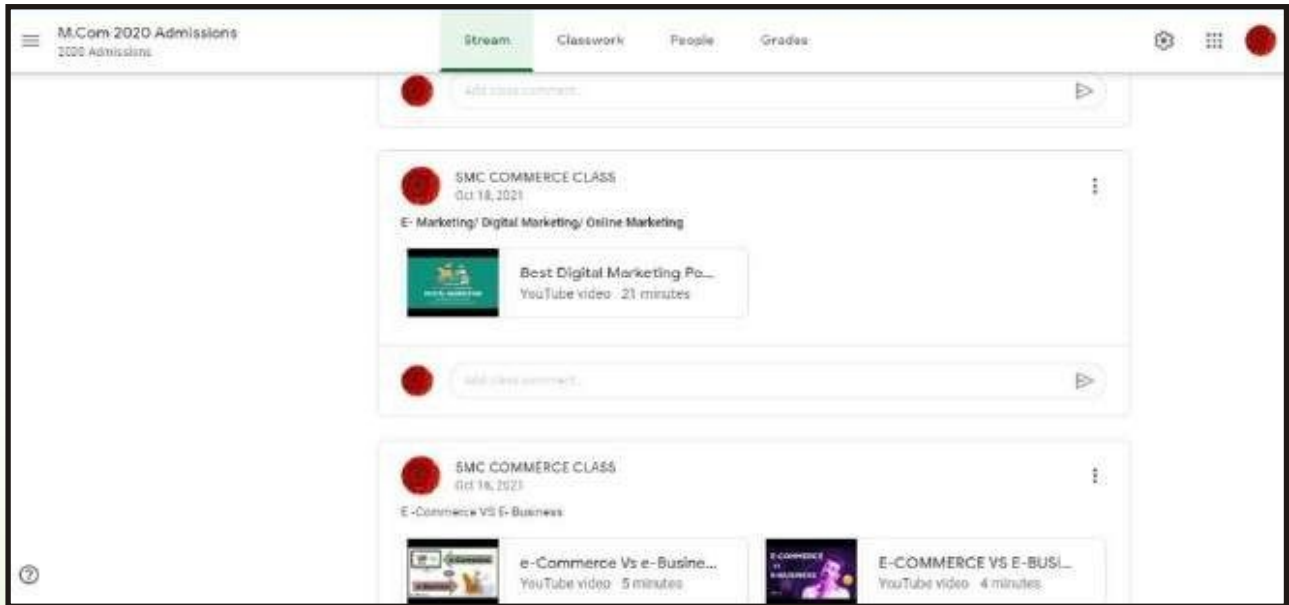
Moodle: <https://chemistrismc.gnomio.com/user/profile.php?id=10>



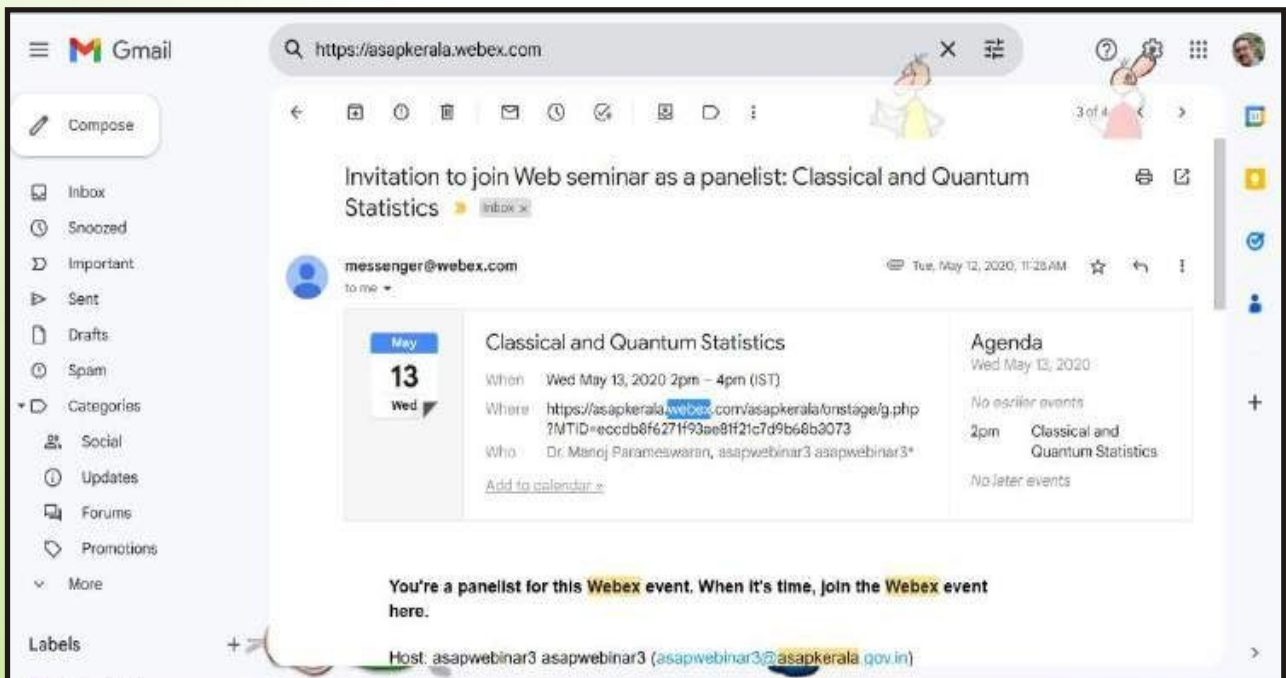


Department of Economics

Learning Management System - Google Classroom



Webex Online Class





Video and audio Lectures are provided for students via online platforms

The image shows a video player window displaying a slide titled "2. SOLUBILITY OF POLYMERS". The slide contains the following text:

- Not all polymers can be dissolved, and even though when they can, the dissolution process may take up to several days or weeks.
- The dissolution of polymers depends not only on their physical properties, but also on their chemical structure, such as: polarity, molecular weight, branching, crosslinking degree, and crystallinity.
- Like dissolves like
- As molecular weight increases, the solubility of a polymer decreases.
- As crosslinking degree increases, the solubility of a polymer decreases.

Strongly crosslinked polymers will inhibit the interaction between polymer chains and solvent molecules, preventing those polymer chains from being

The video player interface includes a progress bar at 00:04:03, a play button, and a volume icon. Below the video player, a Google Drive interface is visible, showing a list of files in "My Drive":

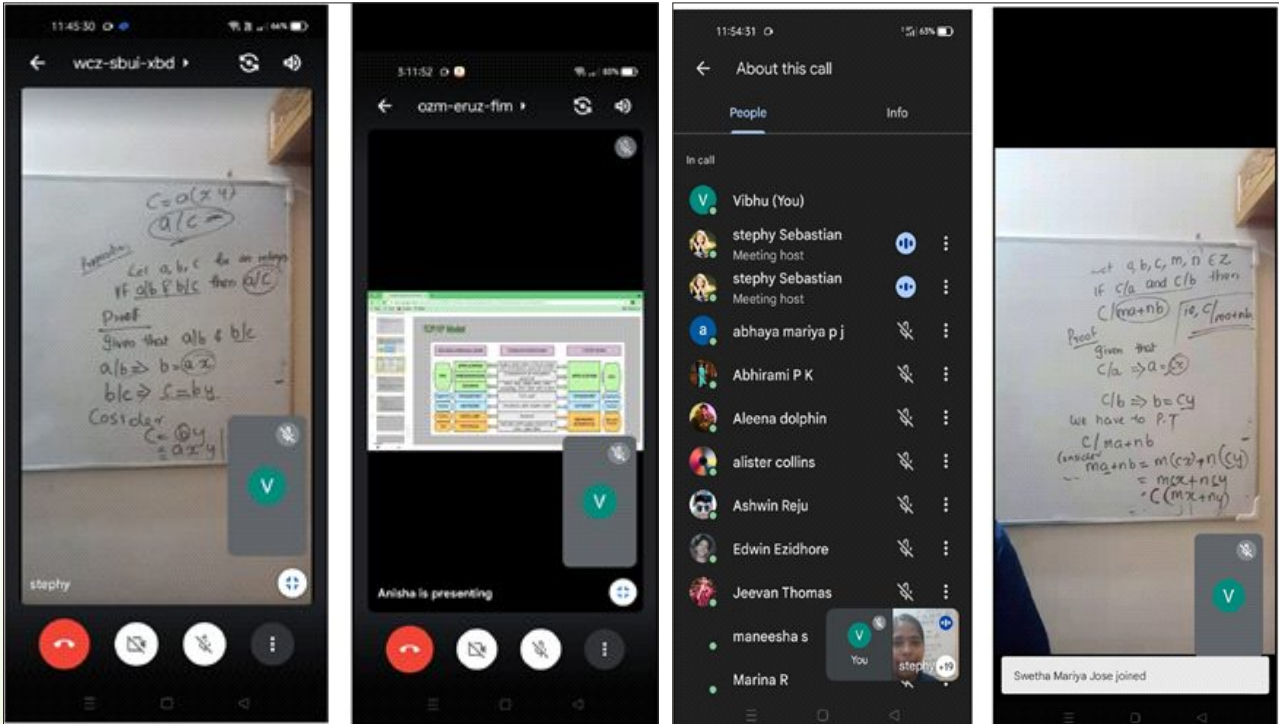
Name	Owner	Last modified	File size
Assignment.docx	me	Jul 8, 2020	14 KB
AUD-20190102-WA0000.amr	me	May 12, 2019	331 KB
AUD-20190102-WA0000.amr	me	May 12, 2019	331 KB
AUD-20190118-WA0004.amr	me	May 12, 2019	242 KB
AUD-20190118-WA0004.amr	me	May 12, 2019	242 KB
AUD-20190118-WA0005.amr	me	May 12, 2019	2.5 MB

The bottom of the screenshot shows a Windows taskbar with several open applications, including "2.3.2 Report ICT_c...pdf", "2.3.2 Report ICT.pdf", "2.3.2 Report ICT.docx", "Mentoring Data 20...pdf", and "Mentrong 2022-23...pdf". The system clock shows 2:53 PM on 7/31/2023.

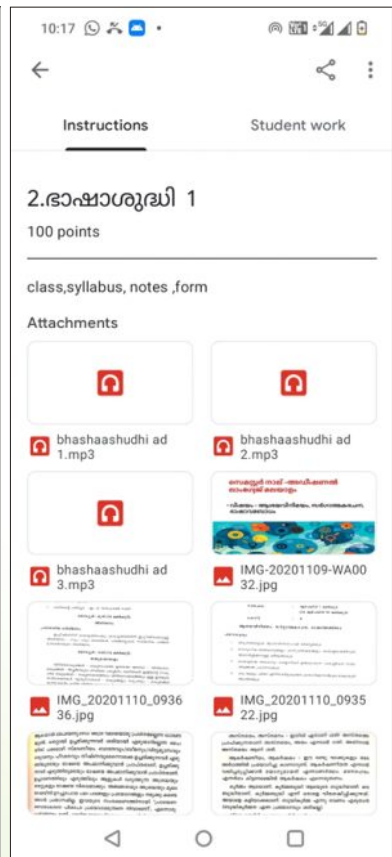
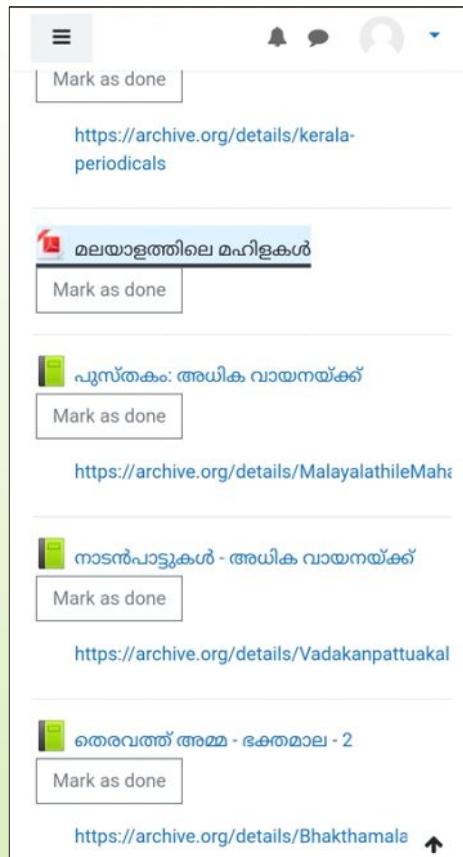


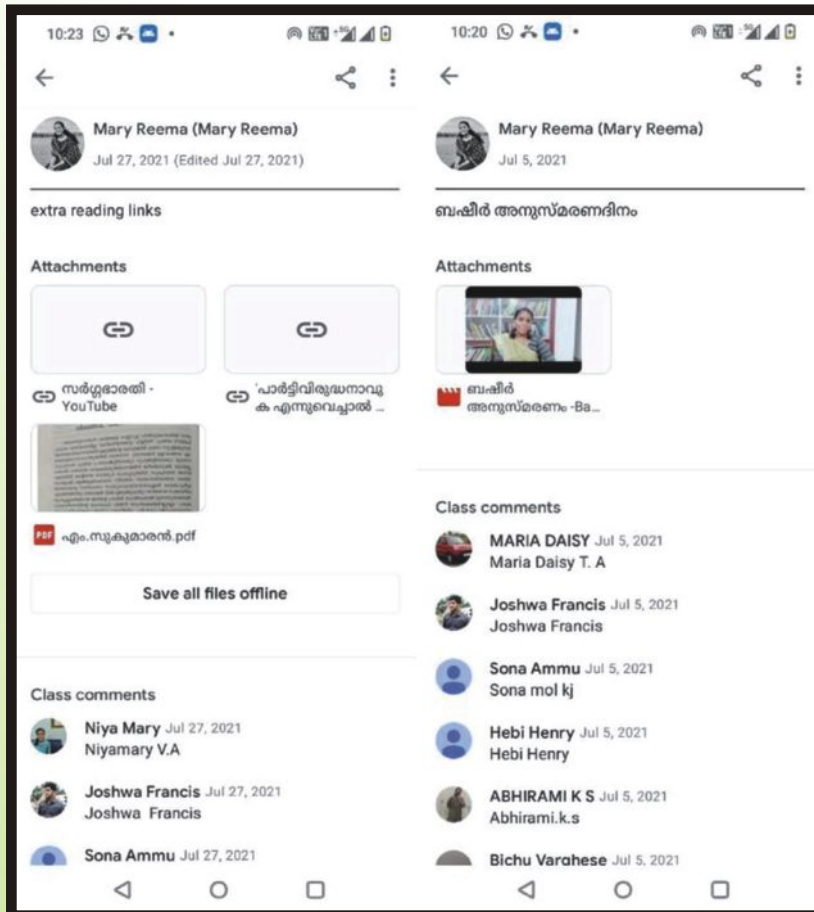
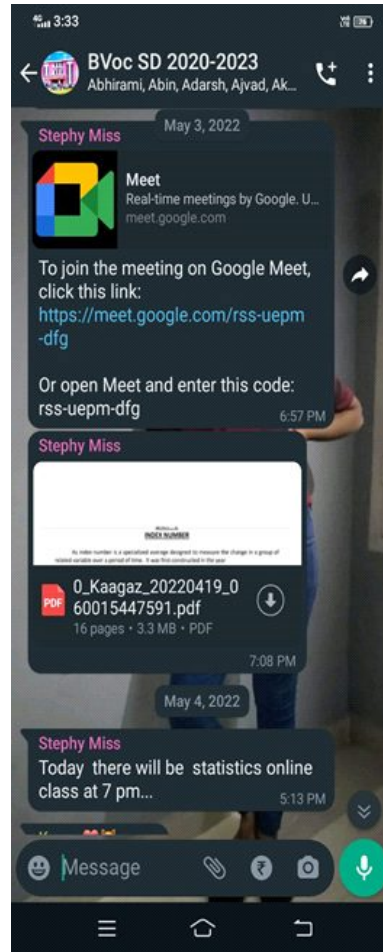
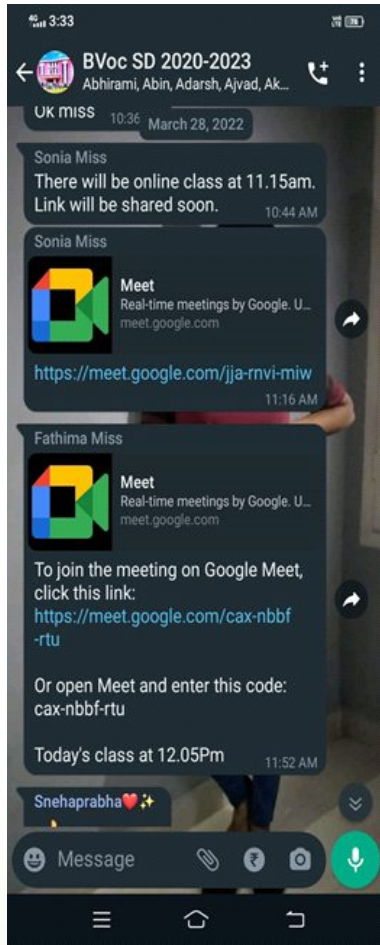
B.Voc

Screenshots of online classes



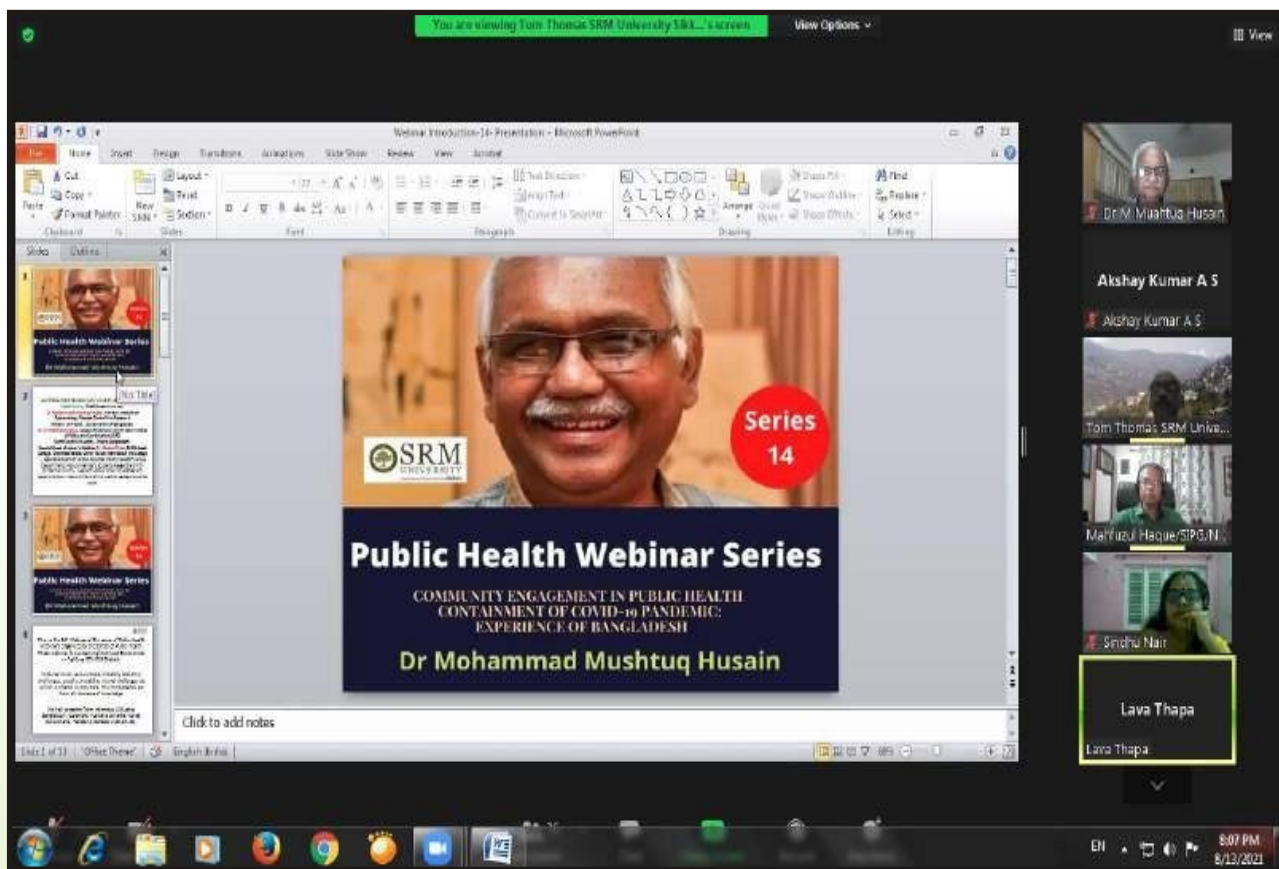
ICT used by Malayalam Department







Online Conferencing Platform - Google Meet

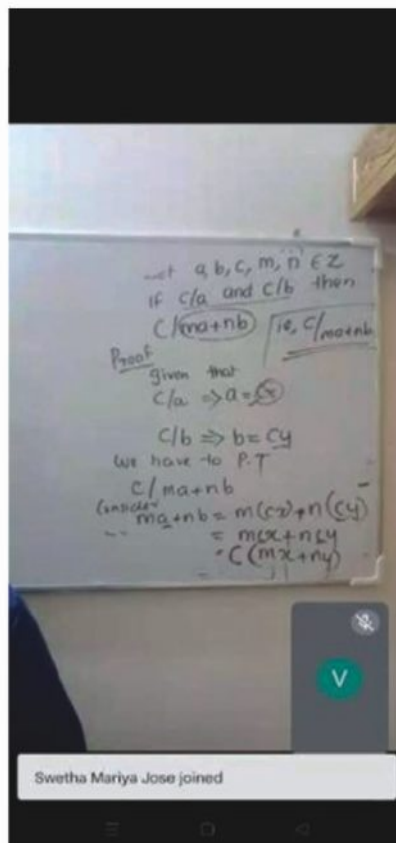
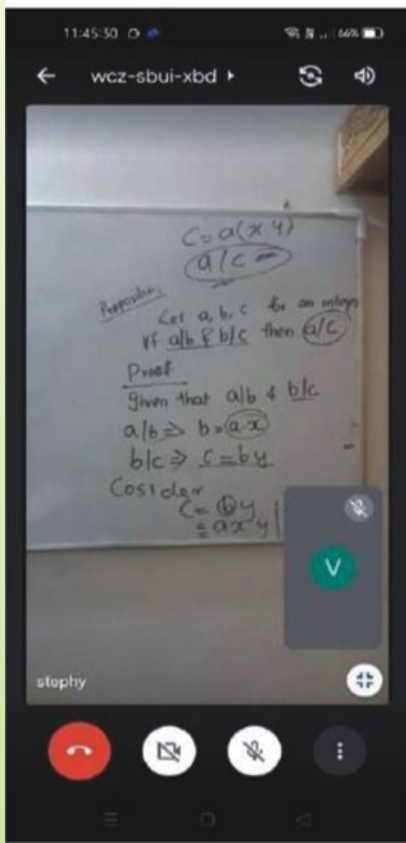
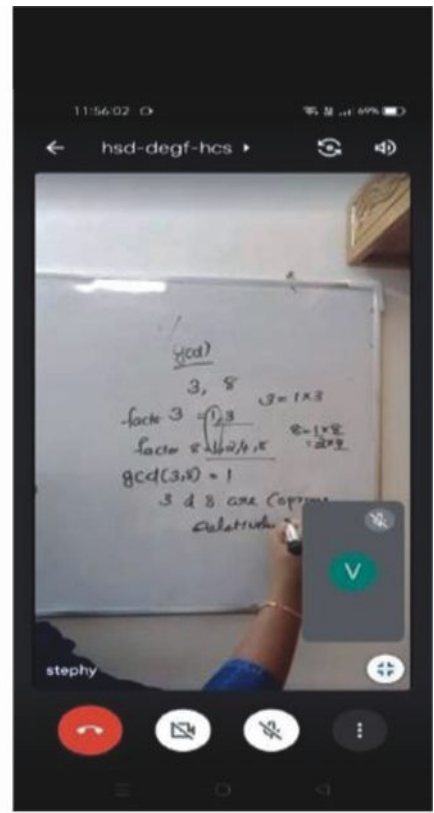
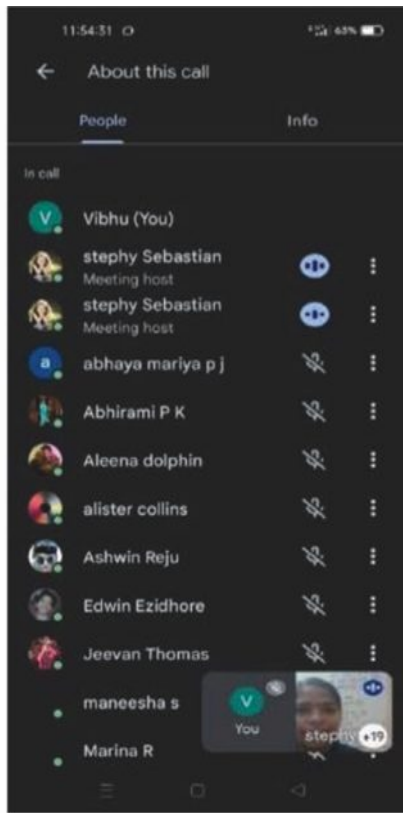
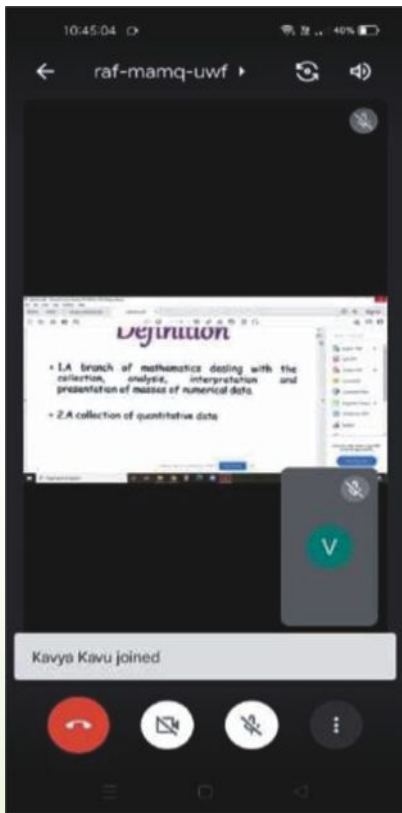


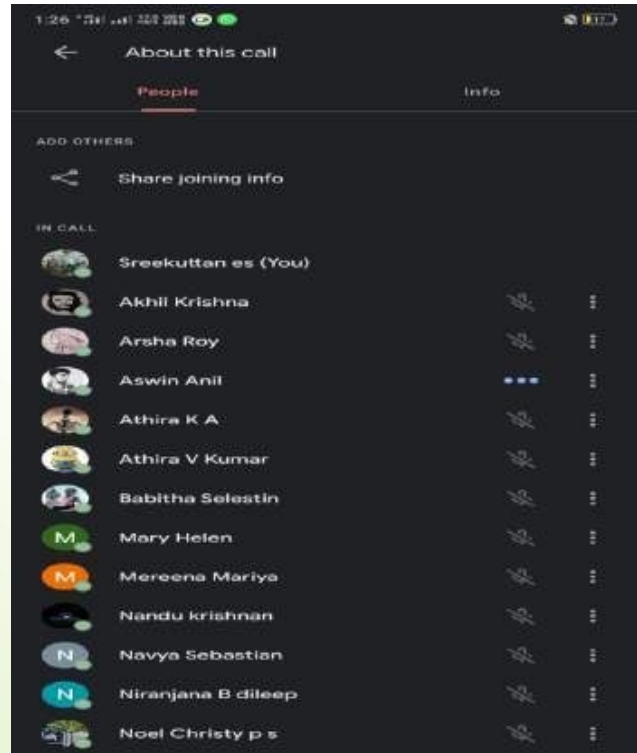
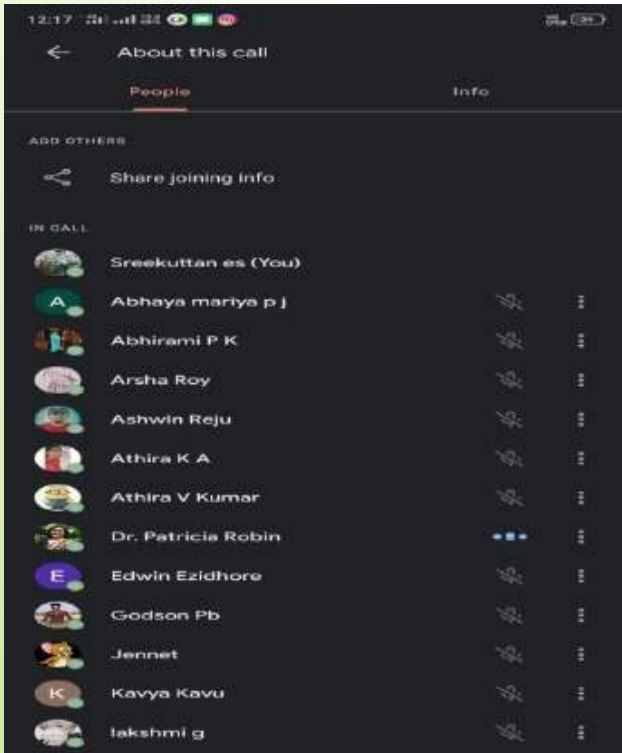
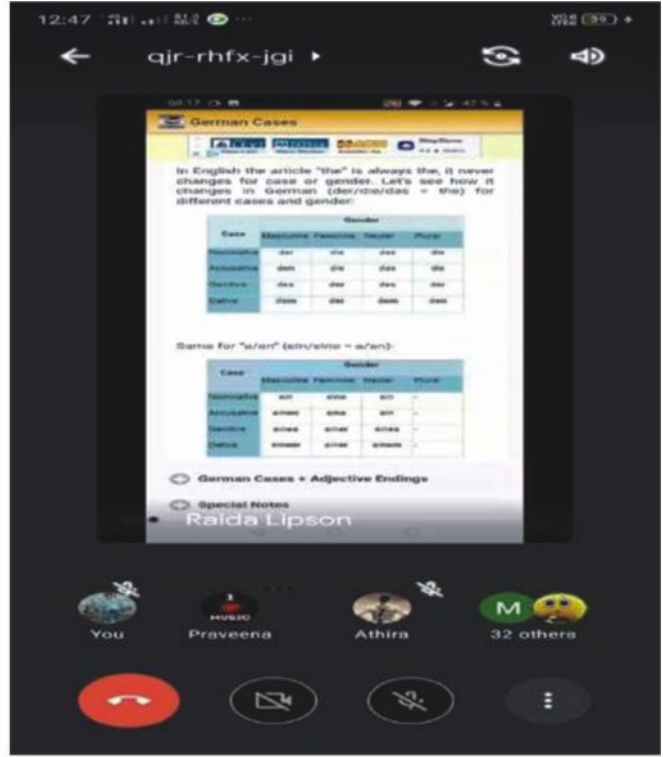
Google Meet

St. Michael's College, Cherthala, Alappuzha, Kerala
 Online Tutorials and Work Done During COVID 19 Lockdown Period
 Department of Chemistry
 Data Sheet of Online Classes Initiated by the Faculty During 21-07-2020 to 24-07-2020

Name of Faculty: Dr. P. Manoj
 Designation: Assistant Professor & Head of the Department

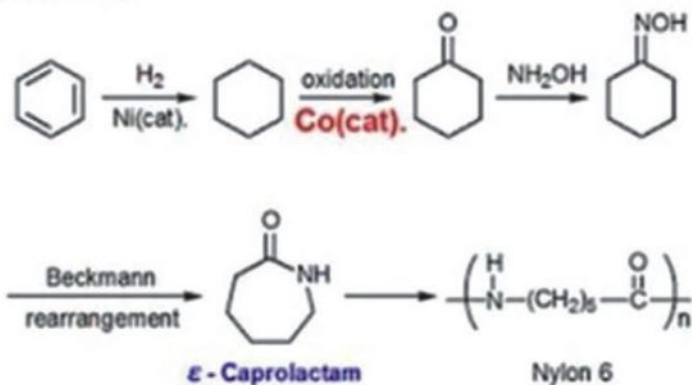
Sl. No.	Date	Time	Subject	Topic Covered	Class	Student Attendance	Method of Teaching	Platform Used
1.	21.07.2020	10:30 - 11:30 pm	Physical Chemistry II	Sulphur Dioxide - Heat Capacity	3 rd Semester, M.Sc. Chemistry	100% (19/19)	Live Class, Lecturing, Power point, presentation & Discussion	Google Meet & Google Classroom
2.	22.07.2020	8:30 - 9:30 am	Physical Chemistry I	Thermodynamics I - Application of Hess's Law	1 st Semester, B.Sc. Chemistry	57% (36/37)	Live Class, Lecturing, Power point, presentation & Discussion	Google Meet & Google Classroom
3.	23.07.2020	10:30 - 11:30 am	Physical Chemistry I	Thermodynamics I - Kirchhoff's Equation	1 st Semester, B.Sc. Chemistry	94.5% (35/37)	Live Class, Lecturing, Power point, presentation & Discussion	Google Meet & Google Classroom
4.	24.07.2020	0:30 - 0:30 am	Physical Chemistry II	Sulphur Dioxide - Heat Capacity	3 rd Semester, M.Sc. Chemistry	100% (19/19)	Live Class, Lecturing, Power point, presentation & Discussion	Google Meet & Google Classroom







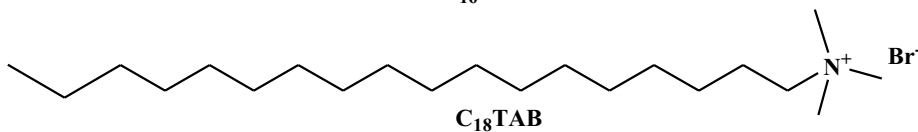
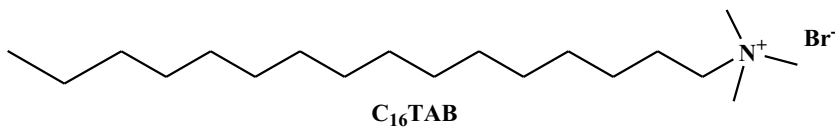
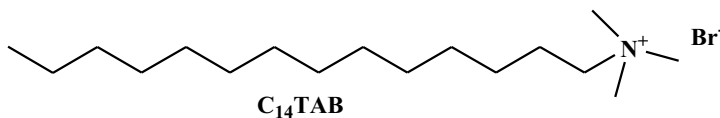
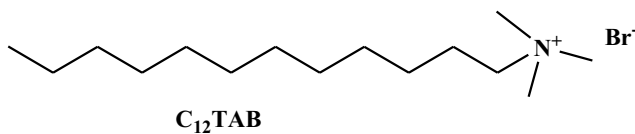
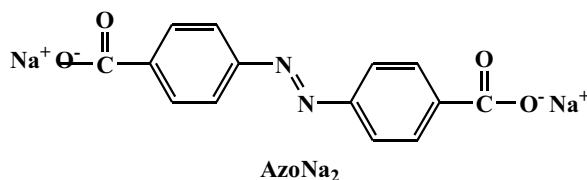
Nylon 6



- ▶ Nylon 6 is a condensation polymer- polymer of caprolactum
- ▶ Benzene- cyclohexane- cyclohexanone- cyclohexanone oxime- caprolactum- nylon 6

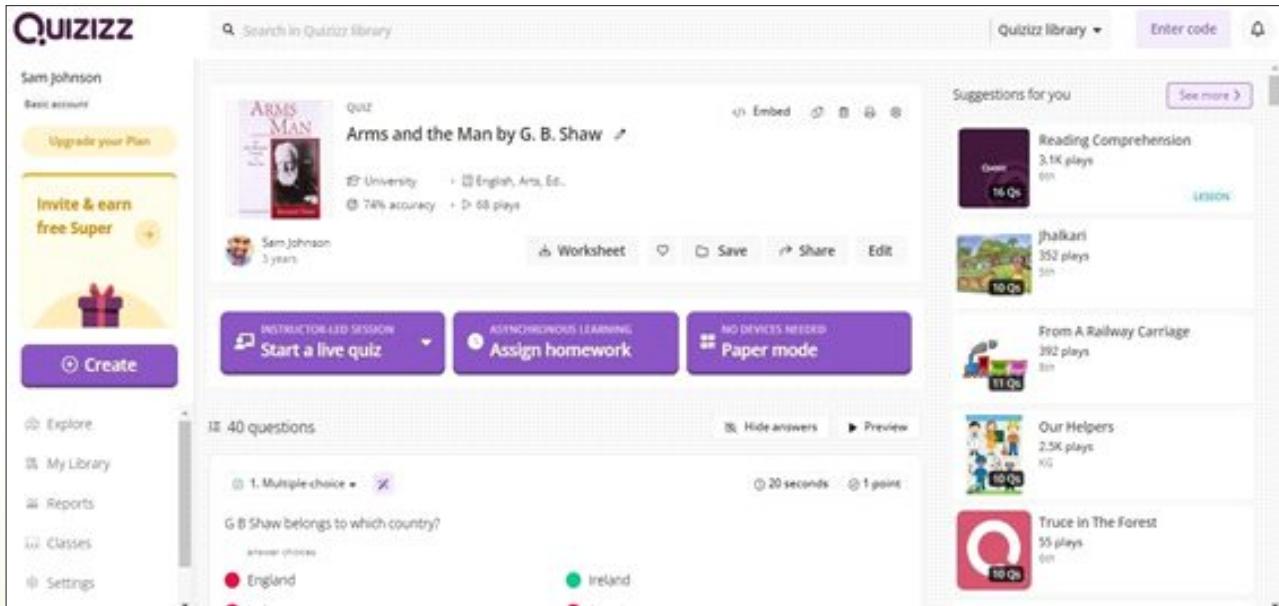
Uses- manufacture of tyre cords, fabrics and ropes

8:56





h. Learning Games Using Quizizz



3. Interactive Learning Tools Used:

a. Google Meet

b. Zoom

c. YouTube Live

4. Links to Access Blended Learning Tools

a. **Google Classroom:** <https://classroom.google.com/c/NTE5MDgxNDg4NTc0?cjc=bp5p4wi> (Code: bp5p4wi)

b. **YouTube Videos:** <https://www.youtube.com/@SJsClasses>

c. E-resources:

https://drive.google.com/drive/folders/1MCrq59UOGHHuK5KX2c29SNe0vpy3Gi6Juq1Zy1xH WES6OnW_bZUHopJsbaff01StEYYGUkcN?usp=sharing

d. Digital Text Books:

https://drive.google.com/drive/folders/1vqAK0zwNY_ynGZNaQogte7oyUkTnzqyf?usp=sharing

e. Question Paper Bank:

<https://drive.google.com/drive/folders/1ptBLUy7u4DPJfHY4H0eORwHwZMebwfZ4?usp=sharing>

f. PowerPoint Presentations:

<https://drive.google.com/drive/folders/1ntfd65TGaknOWoxt2BZv44LfiQAS0UPa?usp=sharing>

g. Learning Games:

https://quizizz.com/admin/quiz/5ea081ffad19a0001be6897a?source=quiz_share