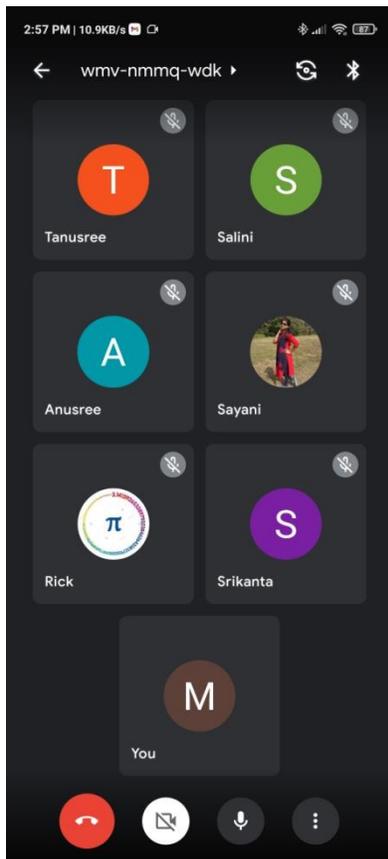
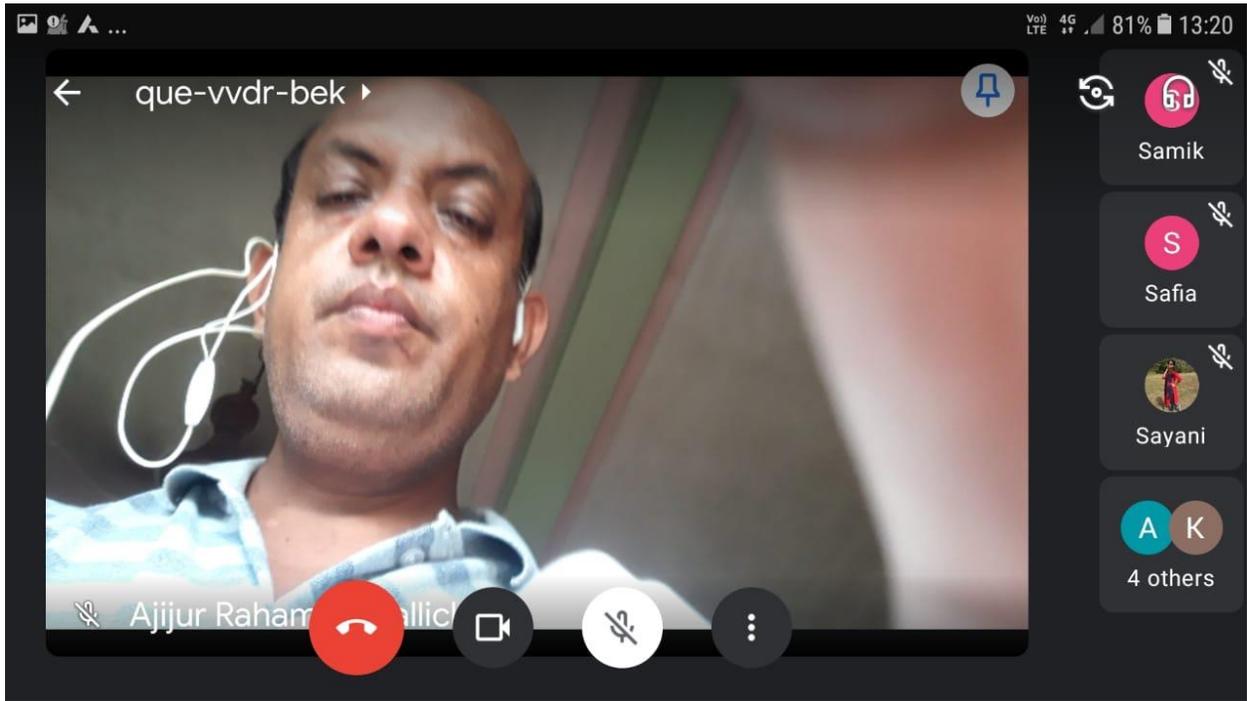
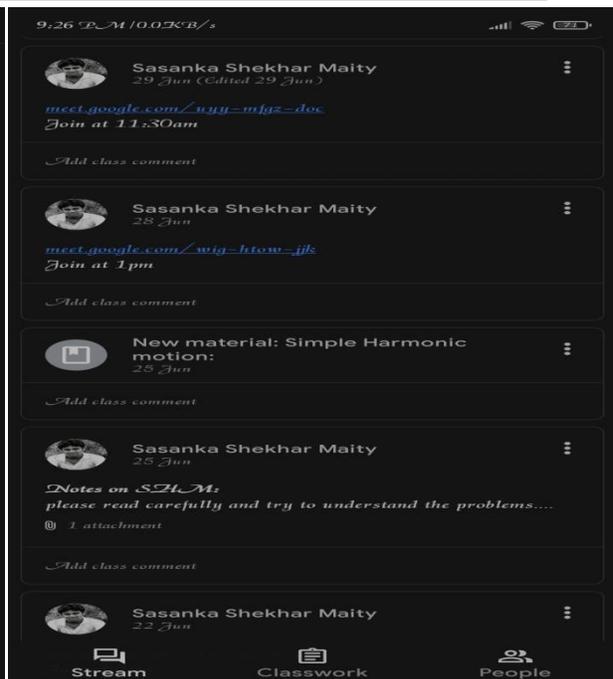
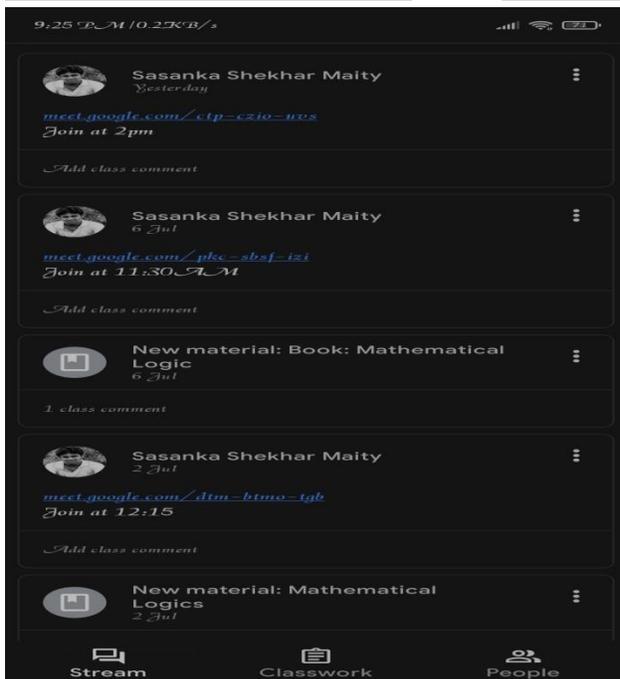
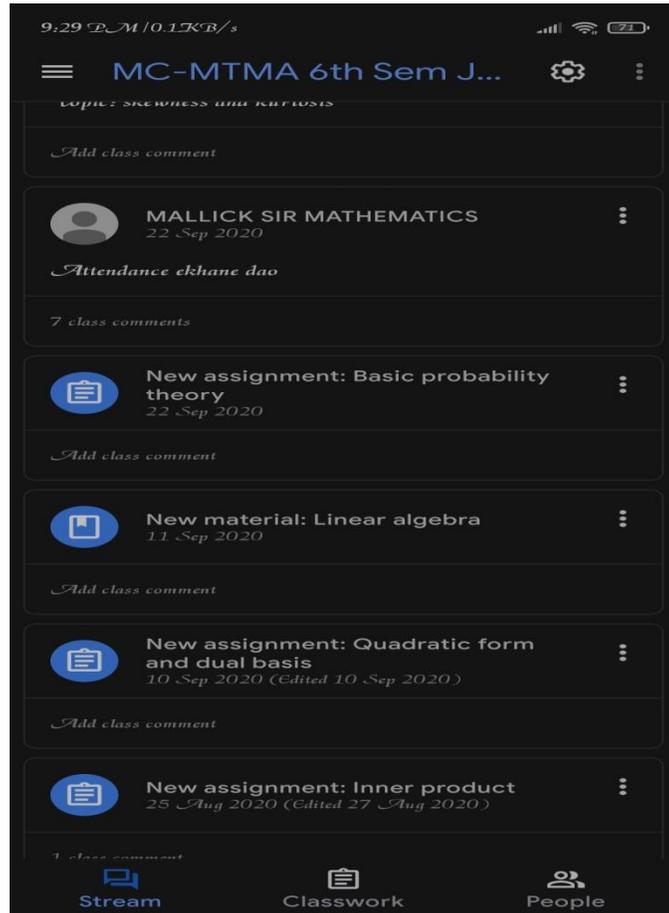
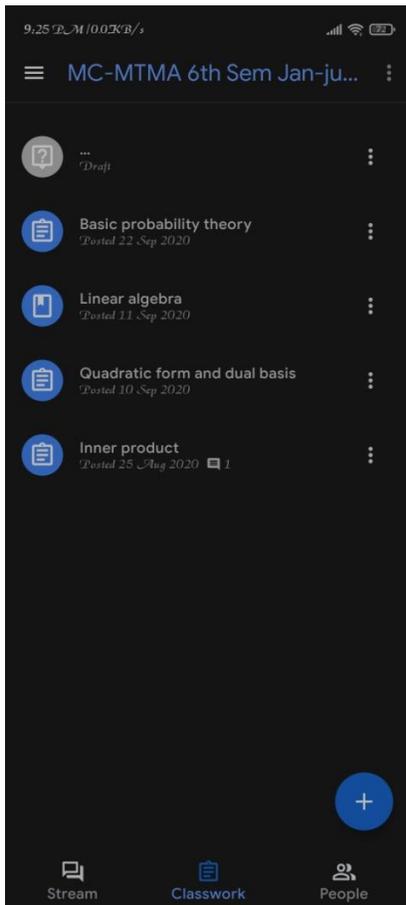


Screen shot of classes:



Assignments and study materials:



Class work & evaluation:

9:25 P.M / 0.17KB/s

100 points

Instructions Student work

0	0	9
Handed in	Assigned	Marked
<input type="checkbox"/>	<i>MARKED</i>	
<input type="checkbox"/>	Anusree Mondal	100/100
<input type="checkbox"/>	Dip Jana	100/100
<input type="checkbox"/>	Koel Mondal	100/100
<input type="checkbox"/>	Rick Parui	0/100 <i>Not handed in</i>
<input type="checkbox"/>	Safia Khatun	0/100 <i>Not handed in</i>
<input type="checkbox"/>	Salini Khatun	100/100
<input type="checkbox"/>	Samik Dhali	100/100
<input type="checkbox"/>	Sayani Das	0/100 <i>Not handed in</i>
<input type="checkbox"/>	Tanusree Chakraborty	0/100 <i>Not handed in</i>

9:25 P.M / 0.37KB/s

100 points

Instructions Student work

0	0	9
Handed in	Assigned	Marked
<input type="checkbox"/>	<i>MARKED</i>	
<input type="checkbox"/>	Anusree Mondal	100/100
<input type="checkbox"/>	Dip Jana	100/100
<input type="checkbox"/>	Koel Mondal	100/100
<input type="checkbox"/>	Rick Parui	100/100
<input type="checkbox"/>	Safia Khatun	100/100 <i>Not handed in</i>
<input type="checkbox"/>	Salini Khatun	90/100
<input type="checkbox"/>	Samik Dhali	0/100
<input type="checkbox"/>	Sayani Das	100/100
<input type="checkbox"/>	Tanusree Chakraborty	100/100

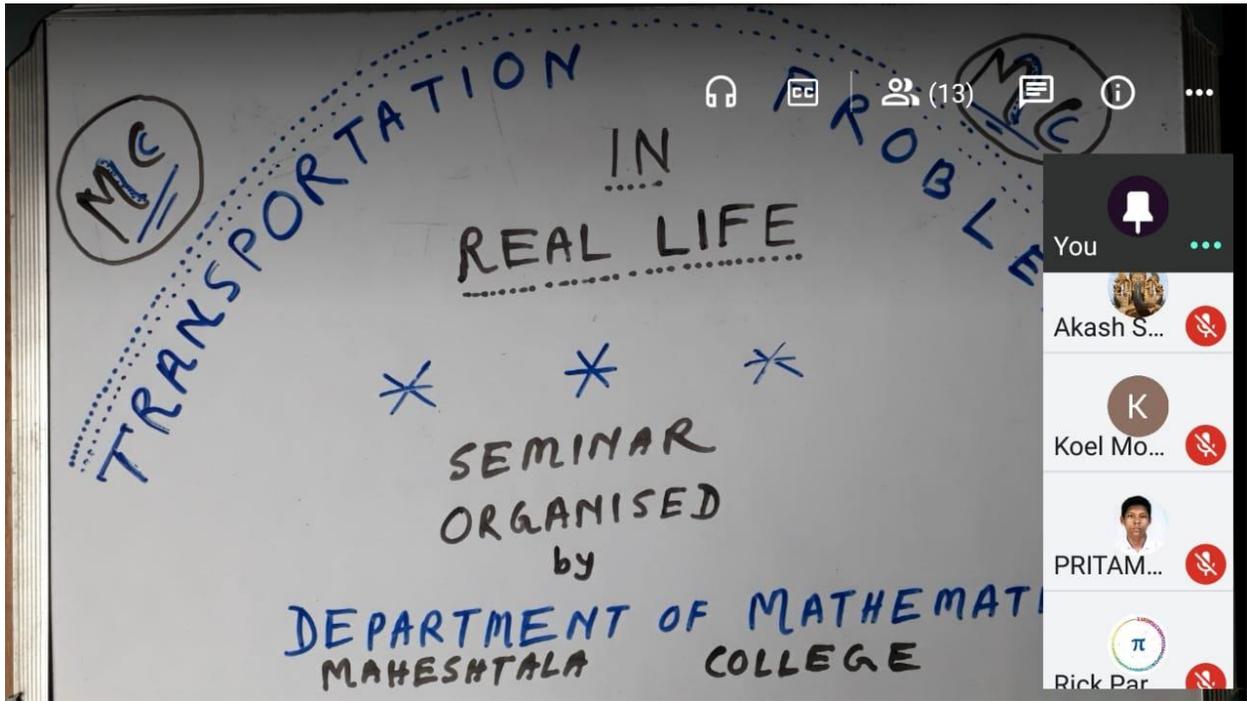
9:25 P.M / 29.37KB/s

100 points

Instructions Student work

0	0	9
Handed in	Assigned	Marked
<input type="checkbox"/>	<i>MARKED</i>	
<input type="checkbox"/>	Anusree Mondal	100/100
<input type="checkbox"/>	Dip Jana	100/100
<input type="checkbox"/>	Koel Mondal	100/100
<input type="checkbox"/>	Rick Parui	0/100 <i>Not handed in</i>
<input type="checkbox"/>	Safia Khatun	0/100 <i>Not handed in</i>
<input type="checkbox"/>	Salini Khatun	100/100
<input type="checkbox"/>	Samik Dhali	100/100
<input type="checkbox"/>	Sayani Das	0/100 <i>Not handed in</i>
<input type="checkbox"/>	Tanusree Chakraborty	0/100 <i>Not handed in</i>

Seminar & Departmental programs:



Some snapshot from Class room:

Microsoft Whiteboard

SEM - 5
Date - 22-1-2021

Group Theory

- Find the no. of inner automorphism of the group S_3 .
- Show that $\text{Inn}(G)$ isomorphic to $G/Z(G)$.
- G is a infinite cyclic group, then show that $\text{Aut}(G)$ is a group of order 2.
- Let $G = \langle a \rangle$ be a finite cyclic group of order n . Prove that $\text{Aut}(G)$ is group of order $\phi(n)$.
- Show that $\text{Inn}(G)$ is normal subgroup of $\text{Aut}(G)$.

Microsoft Whiteboard

EX-1 Find the values of k make each of the following matrices +ve definite.

(a) $\begin{bmatrix} 2 & -4 \\ -9 & k \end{bmatrix}$, (b) $\begin{bmatrix} 4 & k \\ k & a \end{bmatrix}$

(c) $\begin{bmatrix} k & 5 \\ 5 & -2 \end{bmatrix}$

EX-2 Consider the vector space $P_2(t)$ with the inner product $\langle f_1, f_2 \rangle = \int_{-1}^1 f_1 f_2 dt$

(a) Find $\langle f_1, f_2 \rangle$ where $f_1(t) = t+2$, $f_2(t) = t^2 - 3t + 4$

(b) Find the matrix B of the inner product with respect to the basis $\{f_1, f_2, f_3\}$.

EX-3 Prove that the matrix $A = \begin{pmatrix} a & b \\ c & d \end{pmatrix}$ is +ve definite iff a and d are +ve & $|A|$ is +ve.

EX-4 State and prove Cauchy-Schwarz inequality.

EX-5 Find the basis for the subspace w^\perp of \mathbb{R}^3 where $w = (1, 3, -4)$.

EX-1 Evaluate $\int_0^1 \frac{dx}{1+x^2}$ using

- (i) Trapezoidal rule
- (ii) Simpson's $1/3$ rule (Taking $n=6$)

Sol: Let $f(x) = \frac{1}{1+x^2}$

$\therefore n=6, h = \frac{1-0}{6} = \frac{1}{6}$

$\frac{1}{1+\frac{1}{36}} = \frac{36}{37}$

x :	0	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$	1
$y=f(x)$:	1	0.973	0.9	0.8	0.6923	0.5902	0.5

(i) We have by Composite Trapezoidal rule,

$f(0) = -2 < 0, f(1) > 0$

$f(0.5) = -0.37, f(0.7) = 0.34$

$f(0.5) \times f(0.7) < 0 \therefore \exists$ a root betn 0.5 and 0.7

$f(x) = 3x - \cos x - 1, f'(x) = 3 + \sin x$

n	x_n	$f(x_n)$	$f'(x_n)$	$h_n = -\frac{f(x_n)}{f'(x_n)}$	$x_{n+1} = x_n + h_n$
0	0.5	-0.37	3.48	0.106321	0.606321
1	0.606321				

... Ajjur Rahaman Mallick

- Anusree
- Safia
- Rick
- 4 others

Cont. in this way

we get

$$\alpha_1 = \alpha_0 - \frac{f(\alpha_0)}{f'(\alpha_0)}$$

Sim.

$$\alpha_2 = \alpha_1 - \frac{f(\alpha_1)}{f'(\alpha_1)}$$

or

$$x_{n+1} = x_n - \frac{f(x_n)}{f'(x_n)} = x_n + h_n \text{ where } h_n = -\frac{f(x_n)}{f'(x_n)}$$

... Ajjur Rahaman Mallick

- S Safia
- S Samik
- K Koel
- A 4 others

Solution of eqn by Newton Raphson's Method.

$y = f(x) = 0$

root find

Perpendicular → tangent

Ajjur Rahaman Mallick

- S Samik
- π Rick
- S Safia
- S 4 others

$$\frac{1}{e^x + 2} < \frac{1}{e^x}$$

$\therefore \int_0^{\infty} \frac{1}{e^x} dx$ is conv

$\therefore \int_0^{\infty} \frac{dx}{e^x + 2}$ " " "

Test the conv. of Imp

Integrals

(i) $\int_0^{\infty} \frac{dx}{e^x + 2}$

(ii) $\int_1^{\infty} \frac{(x-1)\sqrt{x}}{1+x+x^2+\sin x} dx$

... Ajijur Rahaman Mallick



Akash



Pritam

Add class comment

 **MALLICK SIR MATHEMATICS**
5 Nov 2020
Give attendance here

3 class comments

 **UTSAV BAITHA**
22 Oct 2020
Assignment problem solved.
Roll no- 03

Add class comment

 **Md Abu Shaeed Ali**
21 Oct 2020
I solve this assignment

Add class comment

 **MALLICK SIR MATHEMATICS**
15 Oct 2020

 **MALLICK SIR MATHEMATICS**
5 Nov 2020
Give your attendance here
6 class comments

 **MALLICK SIR MATHEMATICS**
4 Nov 2020
Today I have done travelling sales man problem.
Give attendance here
7 class comments

 **MALLICK SIR MATHEMATICS**
2 Nov 2020
Aj jara class korecho Tara attendance ta ekhane dao
5 class comments

 **Salini Khatun**
21 Oct 2020
Ans

 **MALLICK SIR MATHEMATICS** 13 Sep 2020

ফর্মটা fill up করে submit করো সবাই করবে।

Add class comment

 **MALLICK SIR MATHEMATICS** 12 Sep 2020

Today I have finished Charnes Big M Method.
Tomra attendance ta ekhane dao

7 class comments

 **New material: Linear algebra** 11 Sep 2020

Add class comment

 **Sasanka Shekhar Maity** 11 Sep 2020

Today we are going to discuss about Joint and conditional distribution

Add class comment

 **Sayani Das** 24 Jan

Ans

Add class comment

 **MALLICK SIR MATHEMATICS** 23 Jan

tuesday i shall exam on lpp

Add class comment

 **Koel Mondal** 23 Jan

Answer

Add class comment

 **Tanusree Chakraborty** 23 Jan

Automorphism answer script

 **MALLICK SIR MATHEMATICS** 11 Jan

Solve and send me solutions here

Add class comment

 **Rick Parui** 8 Jan

Ans

Add class comment

 **Anusree Mondal** 8 Jan

Ans

Add class comment

 **Salini Khatun** 8 Jan

Ans

Add class comment

 **Salini Khatun** 19 Jan

Ans

Add class comment

 **Sayani Das** 19 Jan

Ans

Add class comment

 **Dip Jana** 19 Jan

Ans

Add class comment

 **Sasanka Shekhar Maity** 19 Jan

meet.google.com/nij-guhz-itn