



Mechanical Engineering Department

Academic Year: 2020-21	DIVISION: D & E
Class: F.E.	DATE: Div D : 9/06/2021 Div E: 10/06/2021
Course Outcome: CO1 and CO3	Program Outcome: PO1, PO9, PO10 & PO12

Innovative Teaching Method

Title of Innovative teaching method: Activity of Mind Map by MIRO

1. **Name of faculty:** Mr. R. M. Ghogare
2. **Subject:** Engineering Graphics
3. **Objective of method:**
 - I. To improve information recording
 - II. To shows how different facts and ideas are related
 - III. To enhances creative problem solving.
4. **Topic covered through activity:** Basics of Engineering Graphics and Conic curves
5. **Description of method with benefits**

Mind mapping is simply a diagram used to visually represent or outline information. It is a powerful graphic technique you can use to translate what's in your mind into a visual picture. Since mind mapping works like the brain does it allows you to organize and understand information faster and better.

Benefits:

- I. Mind mapping increases your creativity and productivity because it's an excellent tool to let you generate more ideas, identify relationships among the different data and information, and effectively improve your memory and retention.
- II. This activity allows you to quickly generate creative and even unique ideas in less time.
- III. By using a single page or space you can already place a huge amount of information and check its connections.
- IV. The use of colours, images, and keywords in mind mapping aids in enhancing your memory and retention.

Roles and responsibilities:

Teacher

- I. Introduce basic aspects of Engineering Graphics and Engineering Curves theoretically and graphically.
- II. Introduce the MIRO platform for making effective Mind-Map by actually demonstrating how to draw the same on this platform

Student

- I. Understand basics of power plant and different essential parts of power plant and go through virtual industrial visit
- II. Actively participate in group and contribute by means of discussion
- III. Draw the mind map on MIRO and submit the PDF/image on Google classroom.

Group

- I. Form the group of members as per the guidelines by teachers.
- II. Understand and discuss to finalize the best solution for the assigned task.
- III. Assign the work within the group to achieve the task within stipulated time period.

6. Assessment tools:

Assessment of following Mind Map will be done according to Rubrics given below.

	Poor (1)	Good (2)	Very Good (3)	Excellent (4)
Structure	Mark-1	Mark-2	Mark-3	Mark-4
Exploratory	Mark-1	Mark-2	Mark-3	Mark-4
Relationships	Mark-1	Mark-2	Mark-3	Mark-4
Connections between Sections	Mark-1	Mark-2	Mark-3	Mark-4
Extent of Coverage	Mark-1	Mark-2	Mark-3	Mark-4

(A) Structure: Non-linear structure provides a complete picture of your ideas.

(B) Exploratory: Maps hows complex thinking about them meaningful relationships between ideas, themes, and the frame work.

(C) Relationships: Relative importance of ideas is indicated and both simple and complex relationships are mapped very effectively.

(D) Connections: Information is presented clearly and allows for a high level of understanding.

(E)Extent of Coverage: Map shows complex thinking about theme a meaningful relationships between ideas, themes, and the frame work.

7. Evaluation sheet of Attendee

DIVISION A

Roll No	Name Of Student	(A) 4M	(B) 4M	(C) 4M	(D) 4M	(E) 4M	TOTAL 20M
1	SUMIT SHIVAJI AGALE	4	4	4	4	4	20
2	MAYUR KISHOR AHIRRAO	4	4	4	4	4	20
3	ROHIT DIPAK BAIRAGI	4	4	4	4	4	20
4	POORVITA MAHESH BAKLIWAL	4	4	4	4	4	20
5	NACHIKET ARJUN BAVISKAR	4	4	3	4	3	18
6	RUTIKA ARVIND BENKE	4	4	3	4	3	18
7	SURBHI MILIND BHAMARE	4	4	3	4	3	18
8	SHLOK GANPAT BORSE	AB	AB	AB	AB	AB	AB
9	ADITI BHAUSAHEB DAWANGE	4	4	3	3	3	17
10	ATHARVA ANIL DESHMUKH	4	3	3	3	3	16
11	MRUNMAYEE VINOD DESHMUKH	4	4	3	3	3	17
12	YUKTA HARSHAL DHAKE	4	4	3	3	3	17
13	MANSI RAVINDRA DHOKARE	4	4	4	4	4	20
14	DEVIDAS BAPU DUKALE	4	4	4	4	4	20
15	ASHWINI TUSHAR FEGADE	4	4	4	4	4	20
16	SAMIKSHA SAHEBRAO GANGURDE	4	4	4	4	4	20
17	PRANJAL KAMLAKAR GAWALE	4	3	3	3	3	16
18	SHREYA ASHOK GURADDI	4	3	3	3	3	16
19	MANISH BANSILAL HELTE	4	3	3	3	3	16
20	SWANAND VASANT INGALE	4	4	3	3	3	17
21	SWAROOP DNYANESHWAR KALUNGE	AB	AB	AB	AB	AB	AB
22	SARANG DIGAMBAR KHETRE	4	4	3	3	3	17
23	ABHISHEK PANDITRAO AHIRE	4	4	3	3	3	17
24	MEDHA SANDIP BANKAR	4	4	3	3	3	17
25	YUGANT RAKESH BAWDHANKAR	4	4	3	3	3	17
26	SUMIT JAGDISH BHAMARE	4	3	3	3	3	16
27	TANVI MANOJ BHAMARE	4	3	3	3	3	16
28	SHUBHAM ANANDA BHAMBARE	AB	AB	AB	AB	AB	AB
29	TEJAS ANIL BHOSALE	4	4	3	4	3	18
30	VIRAJ MAHENDRA BHOSALE	4	4	3	4	3	18
31	MOHIT PRAVIN CHAUDHARI	4	4	3	4	3	18
32	SNEHA MANOJ CHAUDHARI	4	4	3	4	3	18
33	ANUJA SANDEEP DASHPUTE	4	3	3	3	3	16
34	NILESH DATTU DEORE	4	3	3	3	3	16
35	RAJ SUDHIR DESHMUKH	4	3	3	3	3	16
37	SIDDHESH RAJENDRA DIVATE	4	3	3	3	3	16
38	NUPUR VIJAY DUSE	4	3	3	3	3	16
39	MAYURI PRAMOD GAHIVADE	4	3	3	3	3	16

40	NAMRATA SHANTARAM GANGURDE	4	3	3	3	3	16
41	ROHAN VIJAY AHER	4	4	3	3	3	17
42	SHREYAS SANJAY AHIRRAO	4	4	3	3	3	17
43	VAISHNAVI JAGDISH BADGUJAR	4	4	3	3	3	17
44	PRATHAMESH RAJAN BAHARE	4	4	3	3	3	17
45	AVINASH SANTOSH BHADANGE	4	4	3	3	3	17
46	RITESH ATUL BHAMARE	4	3	3	3	3	16
47	VINIT SATISH BHOSALE	4	3	3	3	3	16
49	SNEHAL ANANDRAO BORGUDE	4	3	3	3	3	16
50	HARSH PAWAN CHAUDHARI	4	4	3	3	3	17
51	NACHIKET SAHEBRAO DEORE	4	4	3	3	3	17
52	PRATIK RAO DESHMUKH	4	4	3	3	3	17
53	CHAITALI SOMANATH DHATRAK	4	4	3	3	3	17
54	RITESH PRAKASH GAMANE	4	4	3	3	3	17
55	SHANTANU NANDKISHOR GHUMARE	4	3	3	3	3	16
56	HARSHAD BALKRUSHNA HADPE	4	3	3	3	3	16
57	MONIKA JAYESH JADHAV	4	4	3	3	3	17
58	RUSHIKESH RAJENDRA DHABALE	AB	AB	AB	AB	AB	AB
59	OMKAR JAYESH DHURJAD	4	4	3	3	3	17
Number Of Students Appeared For The Exam							53
Total Marks Scored By All Students							914
Average Marks							17.24
Target Value							12
Number Of Students Scoring More Than Target Value							53
Percentage Of Students Scoring More Than Target Value							100

DIVISION E

Ro Il No	Name Of Student	(A) 4M	(B) 4M	(C) 4M	(D) 4M	(E) 4M	TOTAL 20M
1	VEDIKA SANDIP KSHIRSAGAR	4	4	3	4	3	18
2	VAIDEHI SATISH KUIITE	4	4	3	3	3	17
3	PRANJAL ANIL KUNDE	4	4	3	3	3	17
4	SHRAVANI ASHOKRAO LAJURKAR	4	4	4	4	3	19
5	CHINMAY VILAS MAHAJAN	AB	AB	AB	AB	AB	AB
6	JAYESH DHANRAJ MAHAJAN	4	3	3	3	3	16
7	RUDRA CHANDRASHEKHAR MAHAJAN	4	4	3	3	3	17
8	KUNAL BAPU MALI	4	4	3	3	3	17
9	VISHVESH JAYPRAKASH MISHRA	4	4	3	4	3	18
10	NANDINI MAHENDRA MORE	4	4	3	4	3	18

11	JANHAVI MILIND MULANE	4	4	3	4	3	18
12	BHAWNA ASHOK MUTHAL	4	4	3	4	3	18
13	AJAY DATTU NAIKWADE	4	3	3	3	3	16
14	ASHWINI SANJAY NIKAM	4	3	3	3	3	16
15	PUSHPAK RAJENDRA NIKAM	AB	AB	AB	AB	AB	AB
16	UDAY RAVINDRA NIMSE	3	3	3	3	3	15
17	ROHIT RANJIT PAL	4	3	3	3	3	16
18	KUNJAL NILESH PANDE	3	3	3	3	3	15
19	ANKUSH ABHINANDAN PANDIT	AB	AB	AB	AB	AB	AB
20	JANHVI RAKESH PATEL	AB	AB	AB	AB	AB	AB
21	SRUSHTI KALPESH PATEL	AB	AB	AB	AB	AB	AB
22	SAKSHI DIGAMBAR PATHAK	4	4	3	3	3	17
23	TEJAS DILIP GANGURDE	4	3	3	3	3	16
24	SAKSHI DNYANESHWAR GHARTE	AB	AB	AB	AB	AB	AB
25	RITESH MAHENDRA JAGTAP	AB	AB	AB	AB	AB	AB
26	BHAGYESH PRADIP JAWALE	AB	AB	AB	AB	AB	AB
27	OMKAR SWAPNIL KACHOLE	AB	AB	AB	AB	AB	AB
28	ROSHAN BHAUSAHEB KAD	4	3	3	3	3	16
29	KUNAL PANDIT KAPADI	AB	AB	AB	AB	AB	AB
30	SHARVARI BHAGYESH KASAR	AB	AB	AB	AB	AB	AB
31	FARHAN TUFAIL KHAN	4	4	3	3	3	17
32	TEJAS KAILAS KHARE	AB	AB	AB	AB	AB	AB
33	AAKANKSHA CHANGDEO KHOLE	3	3	3	3	3	15
34	SAHIL DINKAR KHULE	4	3	3	3	3	16
35	AARTI MILIND MAGAR	4	3	3	3	3	16
36	ADITYA HARKESH MURAI	4	3	3	3	3	16
37	SAKSHI SANJAY MUSALE	4	3	3	3	3	16
38	SHUBHAM POPAT MUTHAL	4	3	3	3	3	16
39	ANKITA SHIVPUJAN OZHA	4	4	4	4	3	19
40	GARIMA RUPESH PACHPUTE	AB	AB	AB	AB	AB	AB
41	PAYAL SANJAY JADHAV	4	4	3	3	3	17
42	HARSHAL OMPRAKASH JANGID	4	3	3	3	3	16
43	YOGITA TIKARAM JUNGHARE	AB	AB	AB	AB	AB	AB
44	DEVENDRA ARVIND KAKADE	4	4	3	3	3	17
45	SARTHAK RAJESH KASTURE	4	4	3	3	3	17
46	RUSHIKESH KEDARNATH KOKATE	AB	AB	AB	AB	AB	AB
48	ANIKET SUNIL MAHAJAN	4	4	4	4	4	20
49	ROHIT JAGDISH MAHAJAN	3	3	3	3	3	15
50	MANAS NANABHAU MALI	AB	AB	AB	AB	AB	AB
51	HARSH SUNIL MORE	3	3	3	3	3	15
52	DURVANKUR ANIL PARDESHI	AB	AB	AB	AB	AB	AB
53	BANSIL PRAKASH PATEL	3	3	3	3	3	15
54	GAURAV UMESH PATIL	3	3	3	3	3	15
55	KUNAL PRADIP PATIL	4	3	3	3	3	16

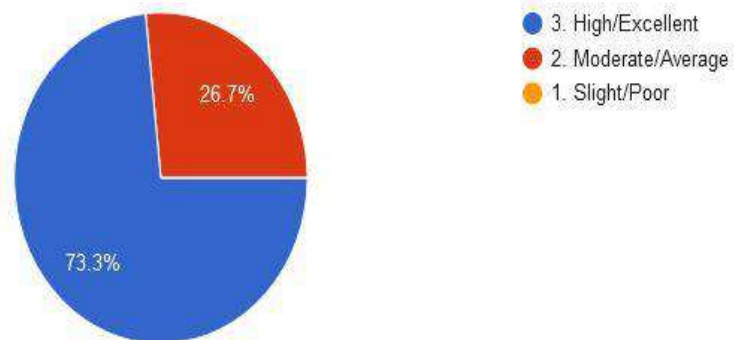
56	PRATIK SANDIP PATIL	3	3	3	3	3	15
57	RUSHIKESH BHAUSAHEB IKHE	3	3	3	3	3	15
58	PRIYANSHU VISHAL SONDAWALE	AB	AB	AB	AB	AB	AB
Number Of Students Appeared For The Exam							39
Total Marks Scored By All Students							644
Average Marks							16.51
Target Value							12
Number Of Students Scoring More Than Target Value							39
Percentage Of Students Scoring More Than Target Value							100

8. Impact analysis

Sr. No.	3-High/Excellent (%)	2-Moderate /Average (%)	1-Slight/Poor (%)
1. Did you understand the cover and objective of the Mind map by MIRO task?	73.3	26.7	--
2. Do you find that methodology is helpful to cover the content of syllabus?	66.7	33.3	--
3. Does this helps you for building a good team?	76.7	23.3	--
4. Does the content covered are relevant and will be helpful as a Life-long learning?	80	20	--
5. Can you want to conduct such activity again?	76.7	23.3	--

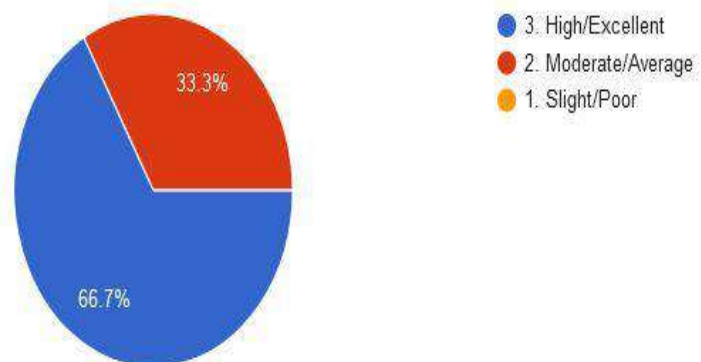
Q.1 Did you understand the cover and objective of the Miro Mind Map Activity?

30 responses



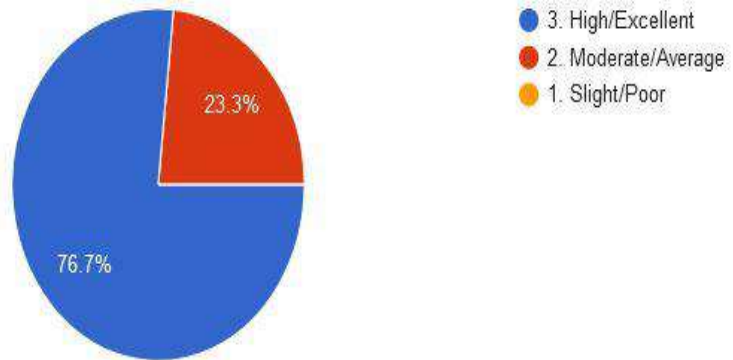
Q.2 Do you find that methodology is helpful to cover the content of syllabus?

30 responses



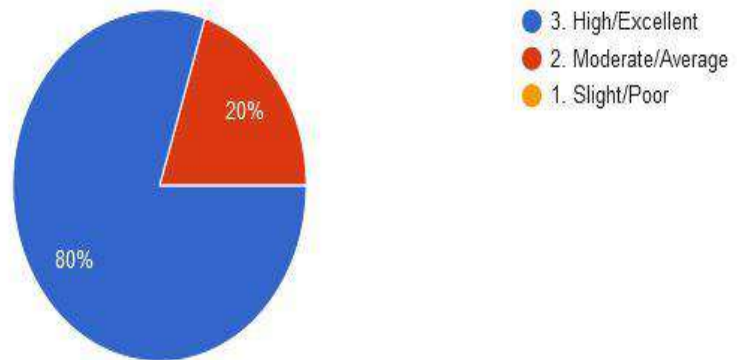
Q.3 Does this helps you to understand the topic more effectively ?

30 responses



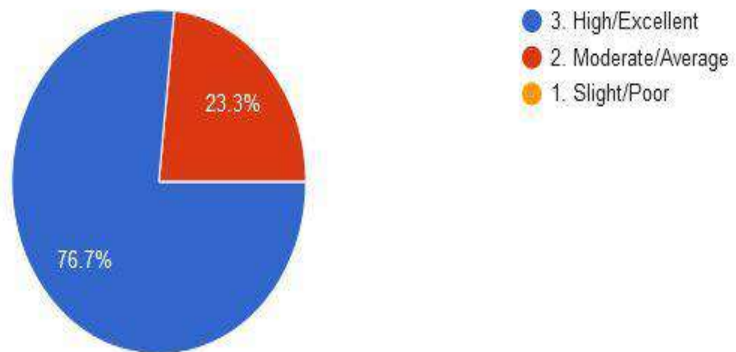
Q.4 Does the content covered is relevant and helpful for life long learning

30 responses



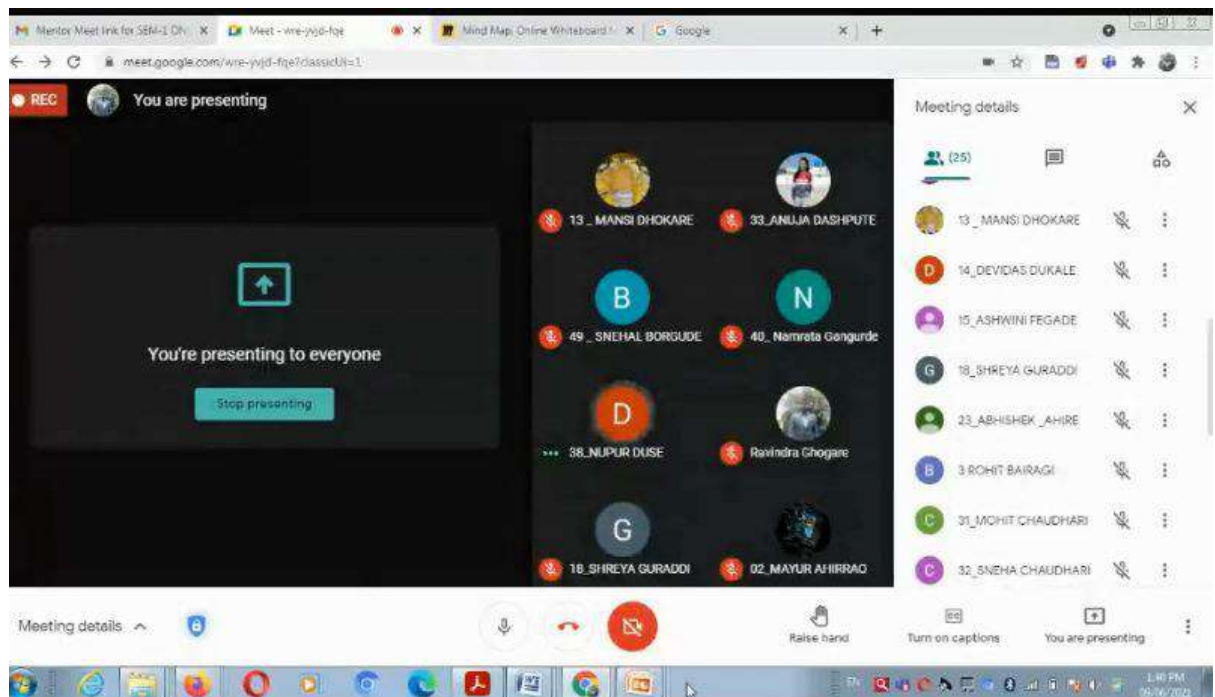
Q.5 Did you want us to conduct such activity again

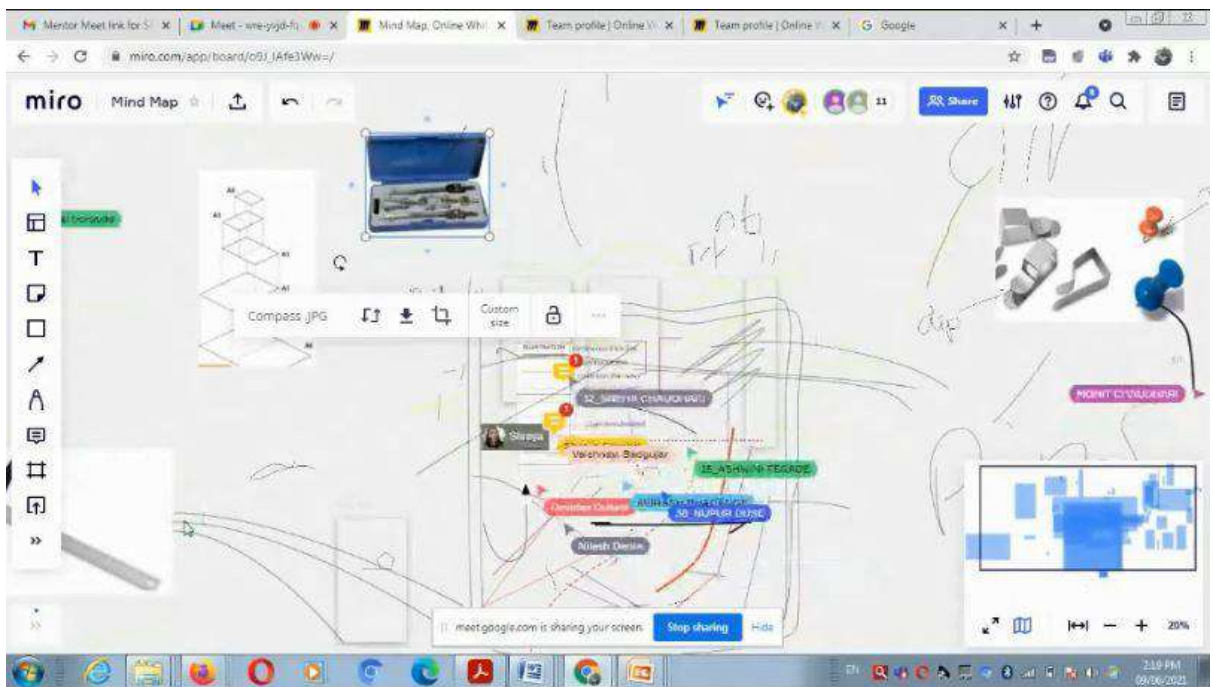
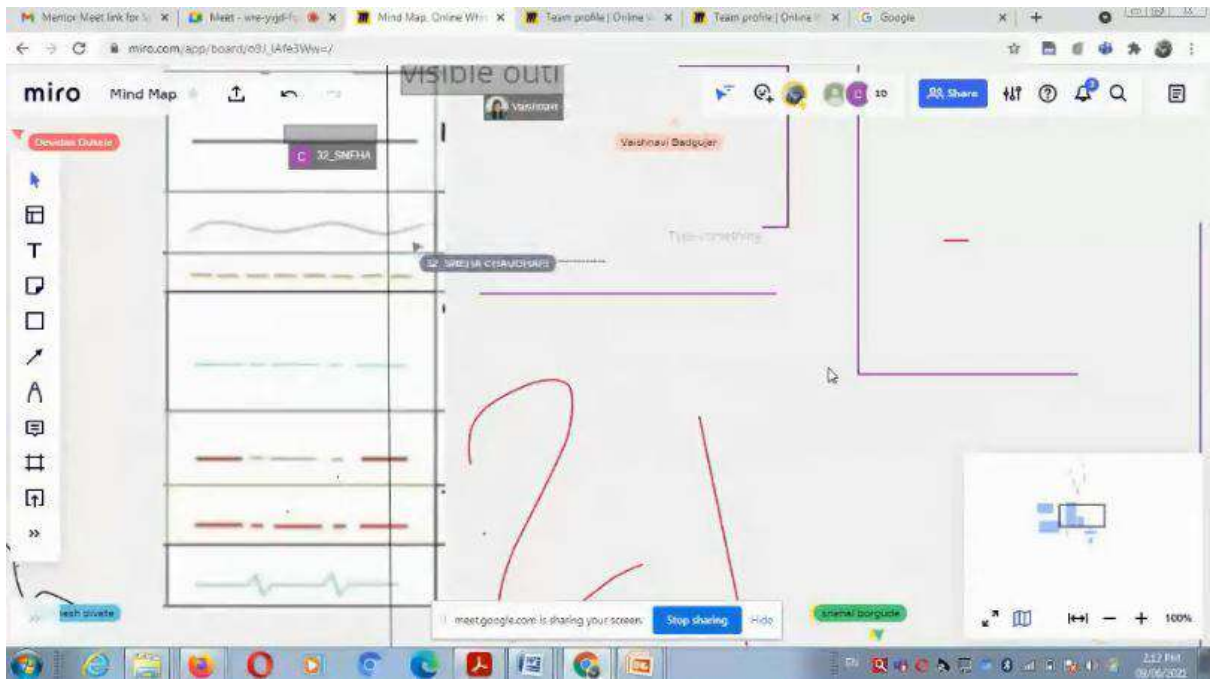
30 responses

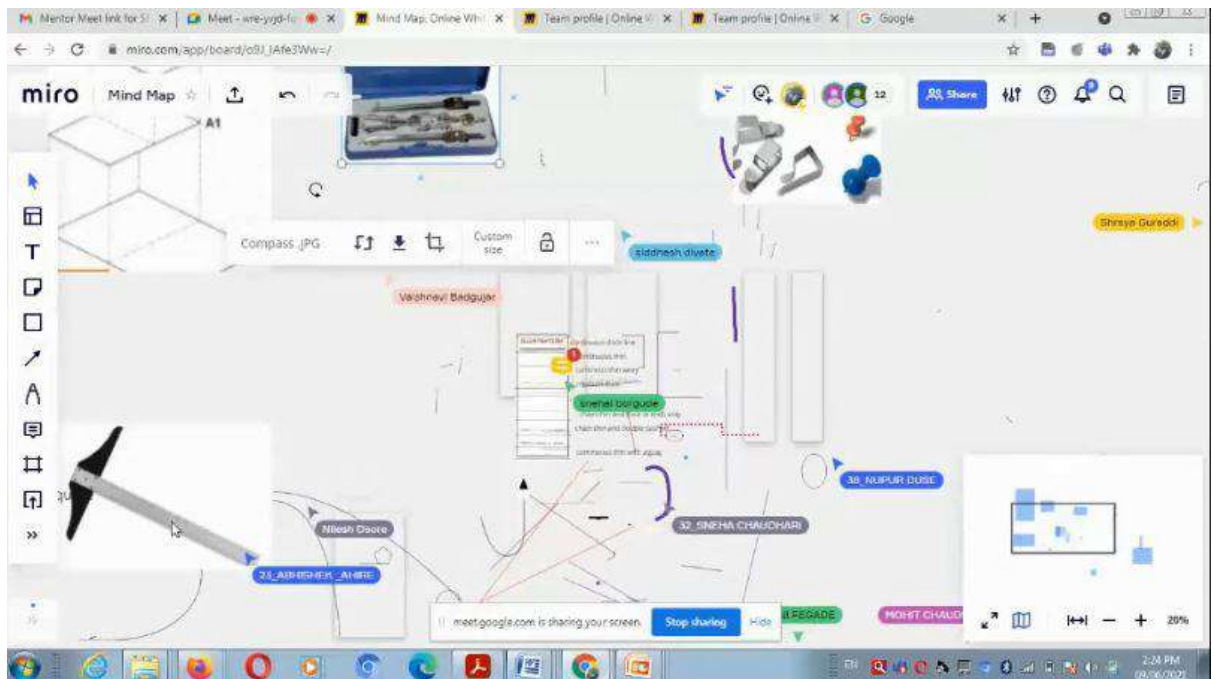


9. Activity Pictures:

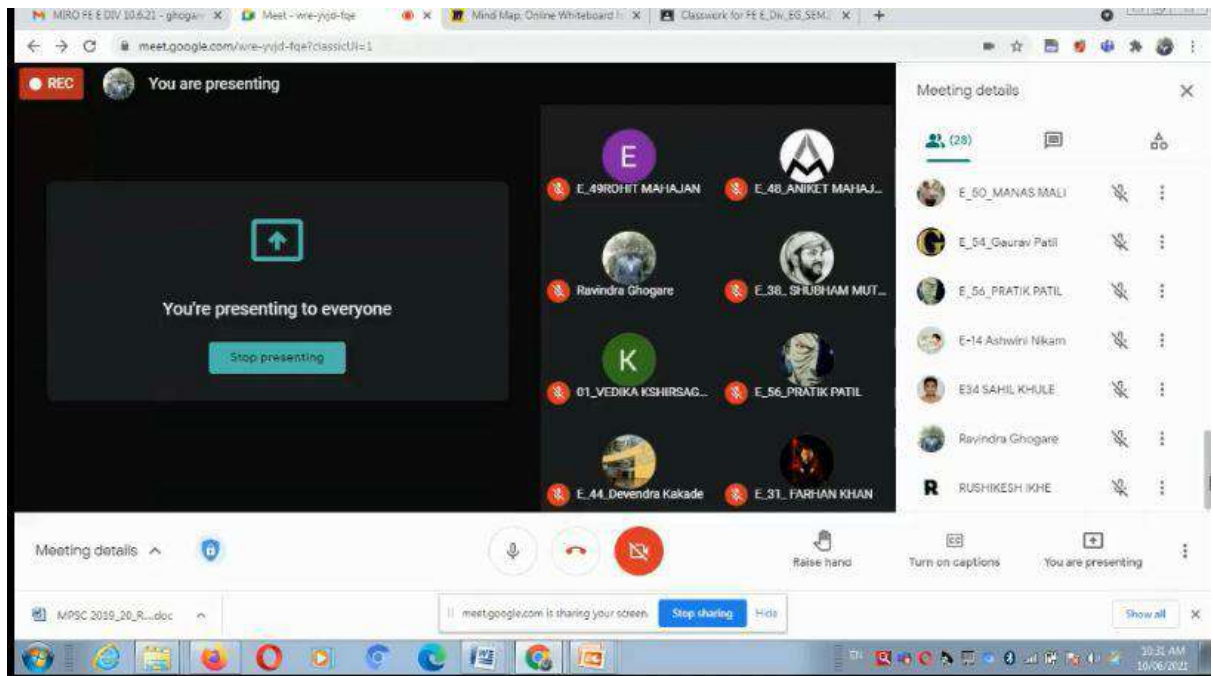
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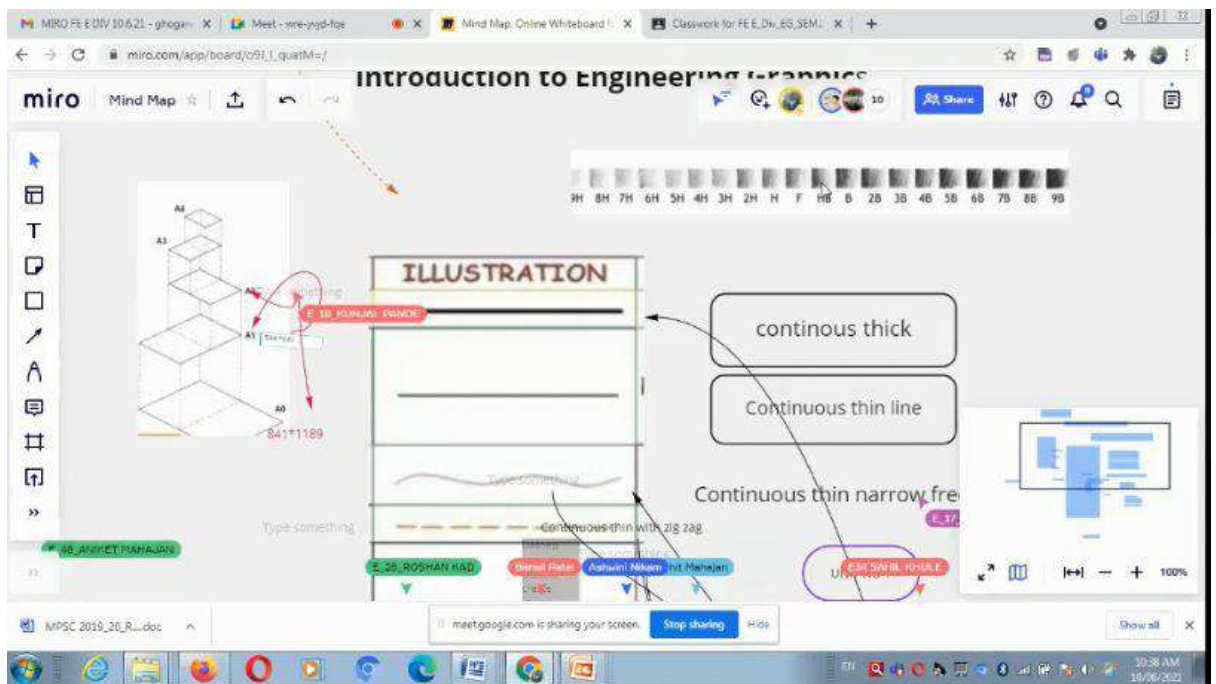
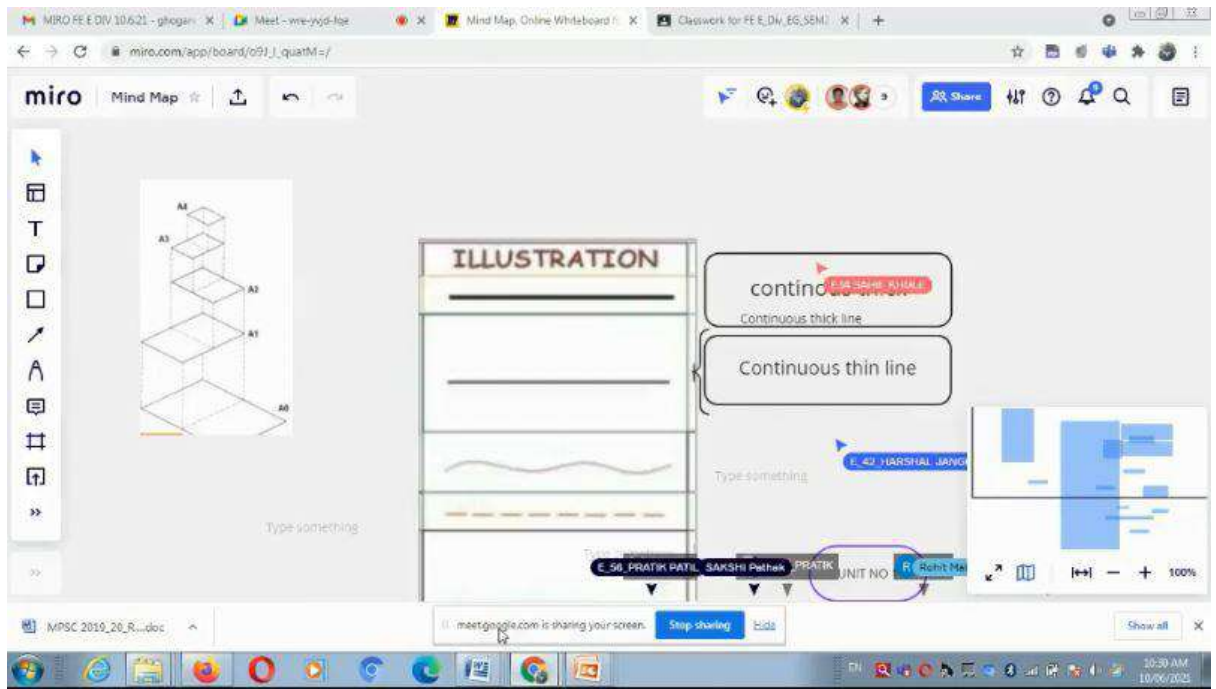


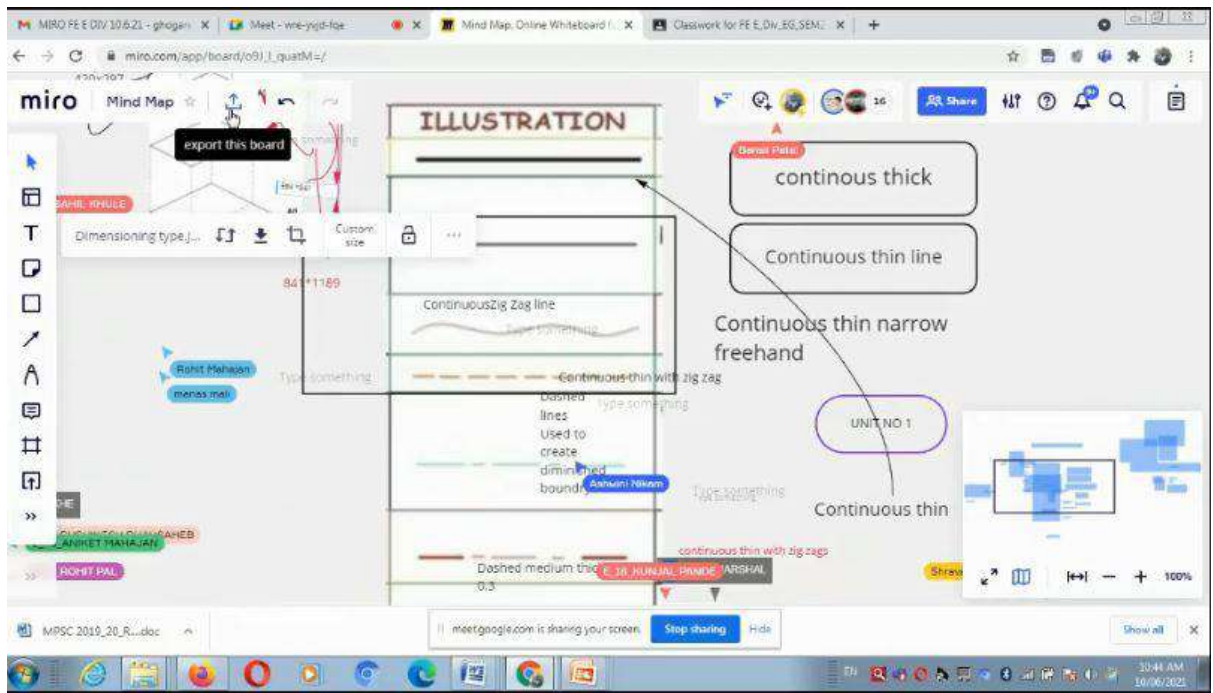




FE E DIV







10. Recorded Video Link:

https://drive.google.com/drive/folders/1WkkOQJW05YPQ0CvVH06cKzru_uOl6CNb?usp=s_haring

11. For review and critique contact: e-mail address of faculty & HOD:

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Mr. R. M. Ghogare

Dr. V. C. Shewale

Subject In charge

H.O.D