

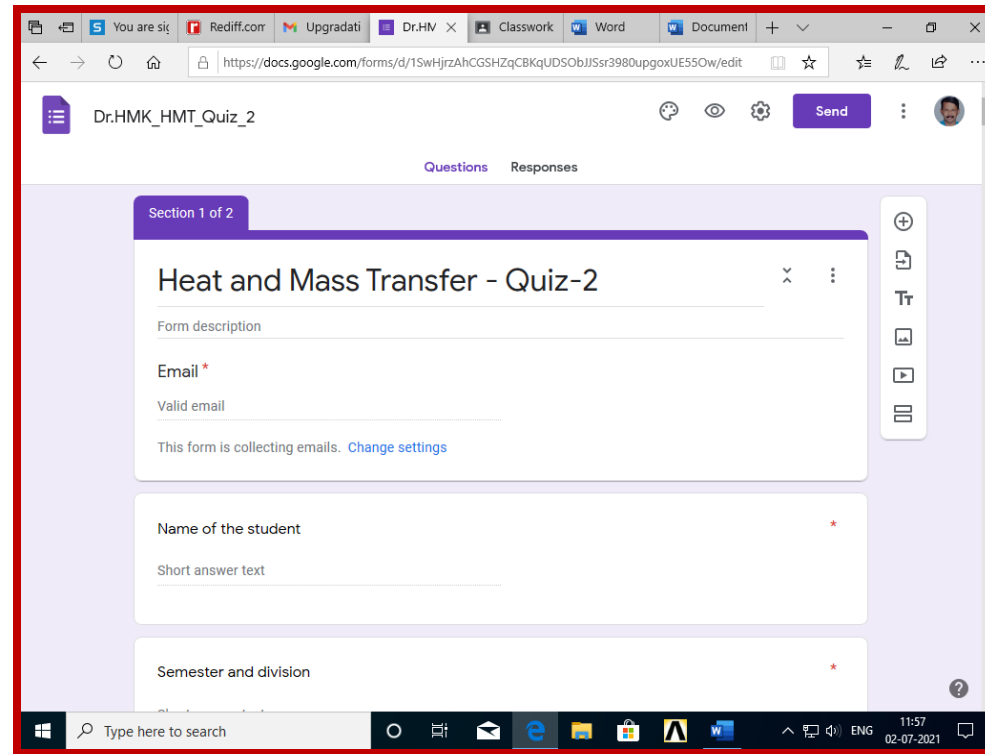
B. V. V. Sangha's
Basaveshwar Engineering College (Autonomous), Bagalkot
Department of Mechanical Engineering

Best practices in the Department

Sl. No.	Best Practices Adapted	Date/Year	Report With Photographs
1.	NPTEL Courses	2019-2022	Encouraging Pre Final and Final year students to undergo the courses conducted by IISc and various IITs through NPTEL platform. Thirty students haven completed their cousres successfully to get relevant knowledge and development of relevant skills of their domain during 2019-2021.
2.	Other Courses	2020-2022	Final year students have undergone other courses (like COURSERA, IEEE) and short term courses conducted by IIT, other institutes and organisations.

3. Quizzes were conducted for VI semester students in Heat and Mass transfer subject to prepare them for the competitive examinations like GATE.

13-07-2020
and
05-08-2020



The image shows a screenshot of a Google Forms quiz titled "Heat and Mass Transfer - Quiz-2". The form is displayed in a web browser window. The browser's address bar shows the URL: <https://docs.google.com/forms/d/1SwHjrZAhCGSHZqCBKqUDSOBJ5sr3980upgoxUE55Ow/edit>. The form is titled "Section 1 of 2" and "Heat and Mass Transfer - Quiz-2". It includes a "Form description" field, an "Email" field with a red asterisk and the text "Valid email" and "This form is collecting emails. [Change settings](#)", a "Name of the student" field with a red asterisk and the text "Short answer text", and a "Semester and division" field with a red asterisk. The browser's taskbar at the bottom shows the Windows logo, a search bar with "Type here to search", and various application icons. The system tray shows the time as 11:57 and the date as 02-07-2021.

Dr.HMK_HMT_Quiz_2

Questions Responses 47 Total points: 50

Heat and Mass Transfer - Quiz-2

Description (optional)

The thickness of thermal and hydrodynamic boundary layer is equal if *

- Prandtl number = 1
- Prandtl number > 1
- Prandtl number < 1
- Prandtl number is equal to Nusselt number

Consider the development of laminar boundary layer for a moving non reacting fluid on a flat plate of length 'L' along the flow direction. The average value of heat transfer coefficient can be obtained by multiplying the local heat transfer coefficient at the trailing edge by the factor *

Dr.HMK_HMT_Quiz_2

Questions Responses 47 Total points: 50

Accepting responses

Summary Question Individual

Insights

Metric	Value
Average	33.11 / 50 points
Median	34 / 50 points
Range	16 - 39 points

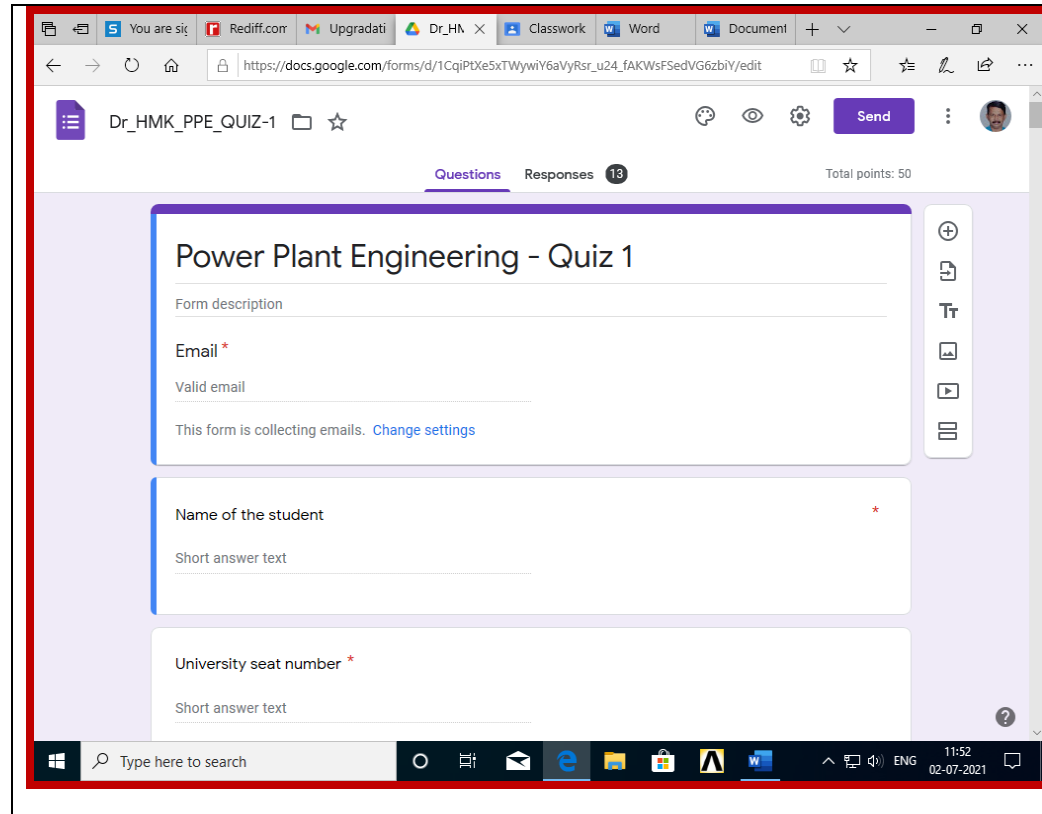
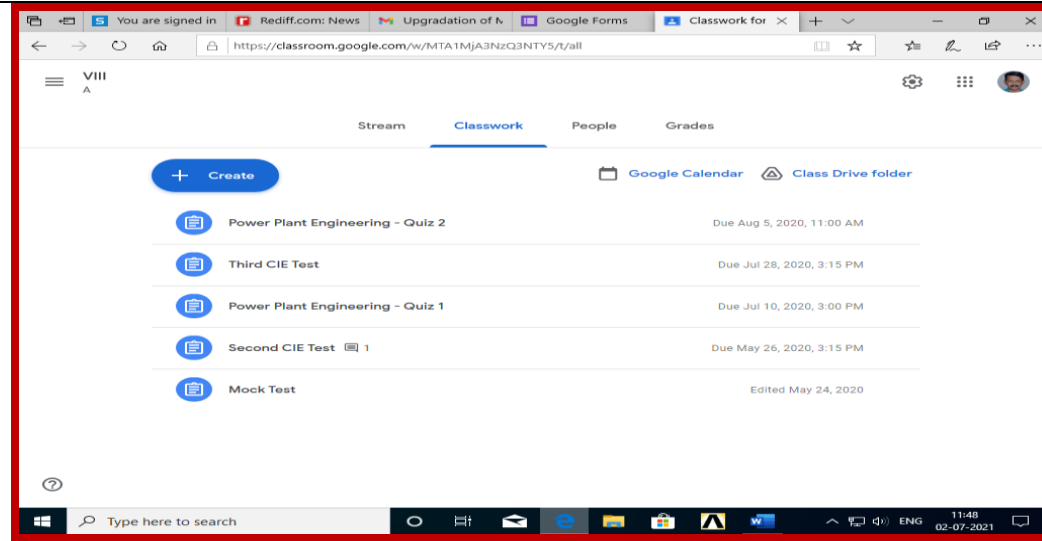
Total points distribution

Points scored	# of respondents
16	1
22	1
24	1
26	1
28	1
30	2
32	3
34	6
35	8
36	4
37	3
38	1
39	1

Course Instructor: Dr. H. M. Kadlimatti

4. Quizzes were conducted for VIII semester students in Power Plant Engineering subject to prepare them for the competitive examinations like GATE.

10-07-2020
&
05-08-2020



Dr_HMK_PPE_QUIZ-1

Questions Responses 13 Total points: 50

The smallest particle which can take part in a chemical reaction is called *

- atom
- molecule
- electron
- compound

A chemical fuel is a substance which releases on combustion *

- chemical energy
- heat energy
- sound energy

Dr_HMK_PPE_QUIZ-1

Questions Responses 13 Total points: 50

Accepting responses

Summary Question Individual

Insights

Statistic	Value
Average	26.23 / 50 points
Median	27 / 50 points
Range	20 - 37 points

Total points distribution

Points scored	# of respondents
20	2
21	2
22	1
23	1
24	1
25	1
26	1
27	4
28	1
29	1
30	1
37	1

Course Instructor: Dr. H. M. Kadlimatti

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5. Technical Seminar assigned by the faculty related to the subject

01st
Semester
A Division
Academic
Year 2020-
2021

In addition to the classroom interactions of Elements of Mechanical Engineering (EME) subject, the students are asked to present the Technical Seminars and submit Assignments related to the subject with real time applications. The impact of such practises helps the students to focus more on the conventional/latest technology. The faculty will assign the various topics to the students. The students will present the topics in the smart classrooms after collecting the information from various sources.

Pratiksha . Chandaragi
R.No - 65 15-04-2021
CSN - 202010482.c
Div - A

Presentation
On
A.Raw materials used per day and electricity used per day
1.Raichur thermal power plant
2.Bellary thermal power plant
3.Yeramarus thermal power plant
B.Reaction steam turbine
By
Pratiksha chandaragi
Semester : 1st
Roll no : 65
Division : A
CSN : 202010482
Subject : Elements of Mechanical Engineering
Subject code : UME163C
Date : 15/04/2021
Course instructor : Dr.S.M.Jigajinni

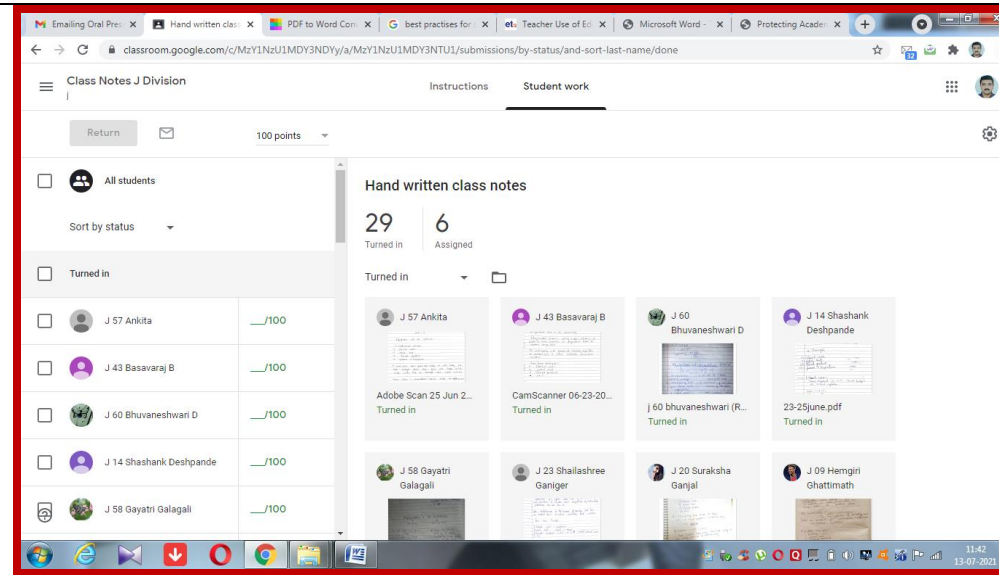
-:Raichur thermal power plant:-
This power station located at vadlapur in the Raichur dist of Karnataka state.It is operated by the Karnataka Power Corporation Limited (KPCL) and was the first thermal power plant to be set up in the state.The power station was commissioned during various periods from 1985 and it accounts for about 70% of the total electricity generated in Karnataka.
Raw materials:
RTPS uses coal for generation of electricity. Its daily requirement of coal is about 20,000 metric tons, when running at full capacity, which is delivered from Western Coalfields Ltd. and Mahanadi Coalfields Ltd. The coal supplied is sampled using a computerized system and sent to the laboratory for testing. This ensures that the proper grade of coal is used.
The plant has also started to use washed coal, due to its lower ash content.[7]
The plant's cooling water is pumped from the Krishna river nearby.

Sample copy of Technical Seminar Report

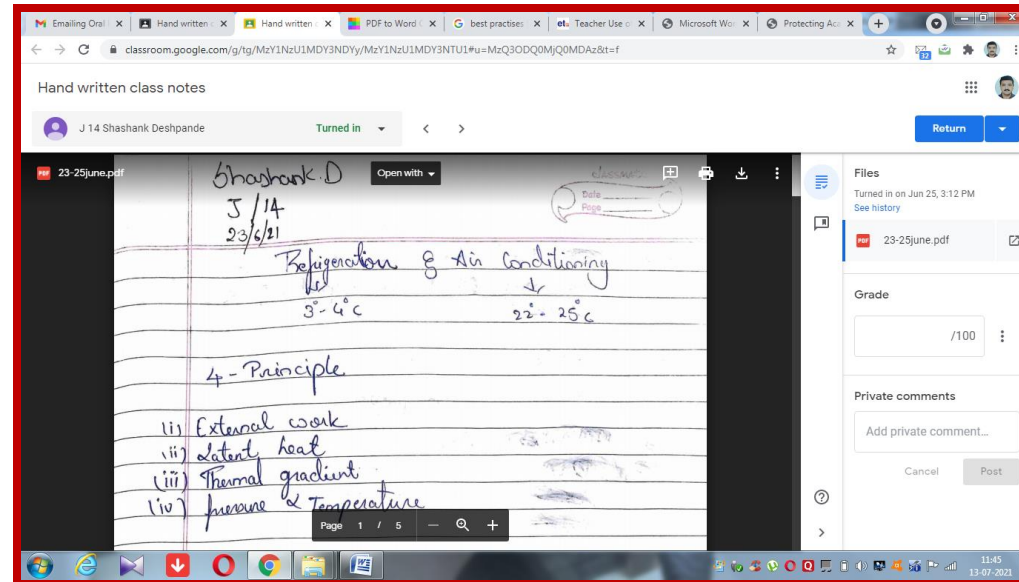
Course Instructor: Dr. S. M. Jigajinni

6. In order to effectively engage the students to attend the online classes of Elements of Mechanical Engineering subject (during pandemic situation), the students are informed to submit the hand written notes of the each particular class to the google classroom.

02st
Semester
I and J
Division
Academic
Year 2020-
2021

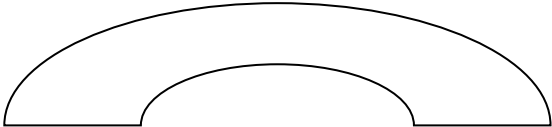


Class Notes submitted by the students to the google classroom



Sample copy of the class notes submitted by one of the student

Course Instructor: Dr. S. M. Jigajinni

7.	Active learning Strategy in the classroom (Think-Pair-Share)	05 th Semester Metal Forming A and B Division Students Academic Year 2019-2020	<p>In order to actively engage the students during the offline classes, and make the class interactive, TPS activity is conducted in every class for about 3-5 minutes. Students learn from each other. It includes all the students in the teaching learning process. TPS activity itself shares the three stages</p> <ol style="list-style-type: none"> 1. For a individual student to think and answer about the question posed by the faculty (≈2 min.) 2. To deepen the students understanding of the topic, instructor asks another question related to previous one. In the pair phase, their share their thinking with each other and proceed with the task. (≈4min.) 3. Finally students share their thinking (or solution) to the entire class (≈6min.) <p>The instructor moderates the discussion and highlights the important points using Digital board.</p> <p><u>One of the Activity for the students to actively engage themselves during the class</u></p>  <p>To Know the importance of metal forming, course insrtuctor will ask the different manufacturing processes by which the above part is produced with relative merits and demerits. It was found that 60% of the students were actively participated in the activity.</p> <p>Course Instructor: Dr. S. M. Jigajinni</p>
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8.	Peer Instruction	01st Semester A Division Academic Year 2020-2021	<p>Pedagogy technique for effective engagement of the students in the classroom. It is a active learning strategy which is structured around well-defined questions. It is a classroom active learning strategy based on specific, well designed questions.</p> <p>Anatomy of peer Instruction:</p> <ol style="list-style-type: none"> 1. Course Instructor asks the question (MCQ) 2. Students Vote individually without discussing with their peers 3. Students discuss with each other and vote for the second time 4. Course instructor brief the summary about the answer and resumes with the lecture <p>Advantages:</p> <ol style="list-style-type: none"> 1. Students with common misconceptions can be overcome by discussing with their peers 2. Entire class changes its opinions or choices based on the interaction they have with their peers <p>Course Instructor: Dr. S. M. Jigajinni</p>
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<p>9.</p>	<p>Predict-Observe-Explain (POE) Technique</p>	<p>02ND Semester B Division Academic Year 2019-2020</p>	<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: left; border-right: 1px dashed black;">LEARNER (Student)</th> <th style="width: 50%; text-align: right;">TEACHER</th> </tr> </thead> <tbody> <tr> <td style="border-right: 1px dashed black;">Observes the Visual</td> <td style="text-align: right;">Plays the Video up to a strategic point</td> </tr> <tr> <td style="border-right: 1px dashed black;">Predicts and Discusses what will follow</td> <td style="text-align: right;">Pauses the Video</td> </tr> <tr> <td style="border-right: 1px dashed black;">Watches Videos and explains: Concept understanding and reasoning</td> <td style="text-align: right;">Shows the rest of the Visual</td> </tr> </tbody> </table> <p>Multiple features of smart board fitted in the class room could be used in order to make this activity effective. It starts with</p> <ol style="list-style-type: none"> 1. Facility that allows multiple video formats to be opened om the smart board 2. Allows the touch screen to play/pause the video where it wants to (Easy to control playback) 3. Allows to take a note layer and create notes, annotation and highlighting the content 4. Explanation phase by screen sharing the content to the students, so that the students can take home the notes 	LEARNER (Student)	TEACHER	Observes the Visual	Plays the Video up to a strategic point	Predicts and Discusses what will follow	Pauses the Video	Watches Videos and explains: Concept understanding and reasoning	Shows the rest of the Visual
LEARNER (Student)	TEACHER										
Observes the Visual	Plays the Video up to a strategic point										
Predicts and Discusses what will follow	Pauses the Video										
Watches Videos and explains: Concept understanding and reasoning	Shows the rest of the Visual										



Fig. Demonstration of formation of (1) Wet Steam (2) Dry steam and (3) Superheated steam using POE Technique using the link, <https://www.youtube.com/watch?v=8InpXBBjtPU&t=31s>.

Course Instructor: Dr. S. M. Jigajinni

