MARATHA VIDYA PRASARAK SAMAJ'S
KARMAVEER ADV. BABURAO GANPATRAO THAKARE
COLLEGE OF ENGINEERING
KBTCOE
www.kbtcoe.org
Permanently Affiliated to Savitribai Phule Pune University Vide Letter No: CA/1542
& Approved by AICTE New Delhi Vide Letter No: 740-89-32 (E) ET/98
AISHE Code - C-41622

Mechanical Engineering Department

Academic Year – 2021-22	Class: BE
Semester – I	Date : 14 /12/2021
CO: CO5	PO: PO1, PO9, PO12

Innovative Teaching Methods

Title of Innovation method/activity: Case Study has been studied by YouTube videos shared on Google classroom and assessment to be done by MCQ quiz by Class marker. Link shared to the students: Go To: www.classmarker.com/register - Select: 'Test Takers' option - Registration Code

1. **Name of Faculty**: Dr. S.P.Mogal

2. **Subject:** Dynamics of Machinery

3. **Objective of Method:**

   I.   Understand the concept of vibration measurement.

   II. Case study on condition monitoring.

4. **Topic Covered through Activity**:
   Vibration measurement and condition monitoring.

5. **Description of method with Benefits:**

In this method we have shared videos on the above topic. Based on these topics multiple choice questions were prepared in Class marker. Class marker is an innovative platform to create a MCQ quiz which provides the online assessment of each student and it generates the report in detail

Benefits of method:

- It helps students to think individually about a topic or answer to a question.
- It teaches students to clear the various concepts through figures, videos, animation etc. and their applications in engineering practice.
- It helps to improve paying attention and to recall the knowledge.

6. Roles and Responsibilities

Teacher

- Teach the key concepts in the classroom
- Prepare the quiz on the topics taught on Class marker software.
- Explain the students how to solve it.
- Help students during the completion of task.
- Prepare assessment methodology

Student

- Open the quiz on PC using login and password
- Think and attempt the quiz within given period of time.

7. Assessment Tools

- Assessment will be done by subject teacher on the basis of MCQ test.
- Each correct answer of theory carries one mark , no negative marking.

Q. No.	Portfolio	Marks
1	At resonance, for underdamped system increasing the value of damping would lead to ?	1
2	A system with 10kg mass 10N/m stiffness and 2.5Ns/m damping is being operated at 1rad/s if Xst=1cm what is the value of X_0 ?	1
3	Phase difference between input and response at resonance is 90^0	1
4	Amplification factor of a system was found to be 2 at resonance. What would be its damping ratio?	1
5	What is the phase difference between input and response for a system with 10kg mass 10N/m stiffness and 15Ns/m damping being operated at 0.5 rad/s	1
6	What is the effect of damping on phase angle at resonance frequency?	1
7	At which frequency ratio, phase angle increases as damping factor increases?	1
8	When frequency ratio (ω/ω_n) is greater than unity, phase angle decreases as _____	1
9	Calculate damped natural frequency, if a spring mass damper system is subjected to periodic disturbing force of 30 N. Damping coefficient is equal to 0.76 times of critical	1
10	Calculate critical speed of a vehicle which moves on a road having sinusoidal profile of wavelength 2.5 m. The mass of the vehicle is 300 kg and natural frequency of its spring suspension system is 8 rad/sec	1

8. Evaluation sheet of attendee

Roll No	Name of Students	Score out of 10

3	Aher Prerana Bhausaheb	10
4	Ahire Shubham Balchandra	8
5	Ahirrao Abhishek Mahendra	6
6	Ambekar Krishna Sanjay	9
7	Amrutkar Atharva Pramod	10
9	Avhad Prasad Santosh	8
10	Badge Parag Sunil	7
12	Bairagi Priya Narayandas	6
13	Baviskar Siddhi Vikas	7
15	Bhalekar Yash Kiran	9
18	Bhangare Pramila Subhash	6
22	Bonde Chetan Mohan	10
23	Borse Mayur Sanjay	9
24	Brahmankar Tejas Somnath	8
26	Chandwadkar Ashutosh Santosh	7
28	Chaudhari Anuja Nitin	10
30	Chaudhari Pratik Kanhaiyalal	4
33	Chavan Rutuja Vilas	10
34	Chopda Yash Rajesh	10
36	Dawange Satish Trambak	7
39	Deshmukh Prathmesh Ravindra	7
40	Dhanait Sachin Madhavrao	6
41	Dhanwate Ashwini Bhausaheb	7
45	Gaikwad Shrikant Anil	8
49	Gholve Sachin Baban	7
53	Jadhav Aniruddha Dilip	8
55	Jadhav Trupti Sanjay	9
60	Kadam Sandesh Suresh	10
61	Kale Satish Ganpat	10
67	Lohakane Vedant Ashokrao	10
68	Mahale Hardik Subhash	10
70	Mahatme Om Kiran	7
72	Metkar Shantanu Hemant	10

9.Impact Analysis

SN	1- High/Excellent	2 - Moderate	3 - Average

1. Did you understand and cover the objective of the activity?	79.3	20.7	-
2. Do you find this innovative teaching method is helpful to understand the procedure for fault diagnosis?	82.8	17.2	-
3. Does the content covered are relevant and will be helpful as a life-long learning?	75.8	24.2	-
4. Can you want to conduct such activity again?	MAY BE = 10.34 YES = 89.65 -		

10. Activity Picture
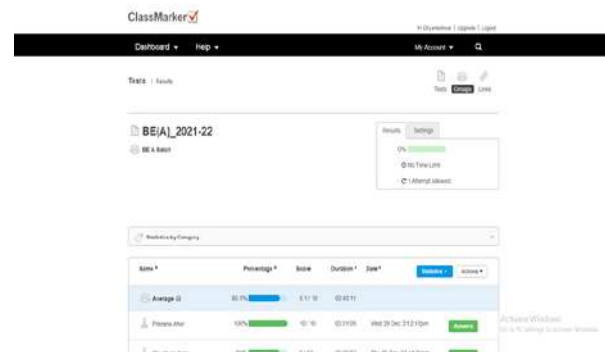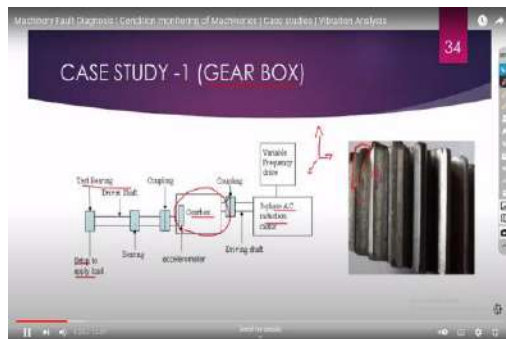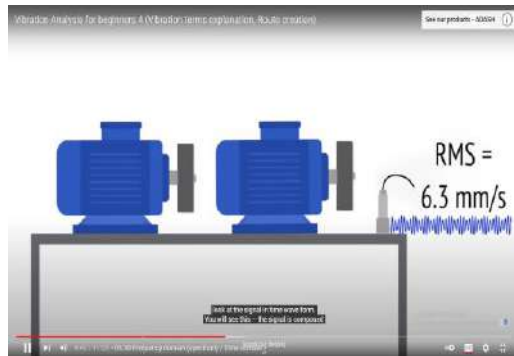
9. For review and critique contact: e-mail address of faculty and HOD
mogal.shyam@kbtcoe.org, hod.mech@kbtcoe.org

Dr. S.P.Mogal   Dr. S.P.Mogal
Subject In charge   Module Coordinator

Dr. A.B.Kakade   Dr. V.C.Shewale
NBA Coordinator   HoD