

Criterion II
Teaching-Learning and Evaluation

ICT TOOLS
Usage in the Institution

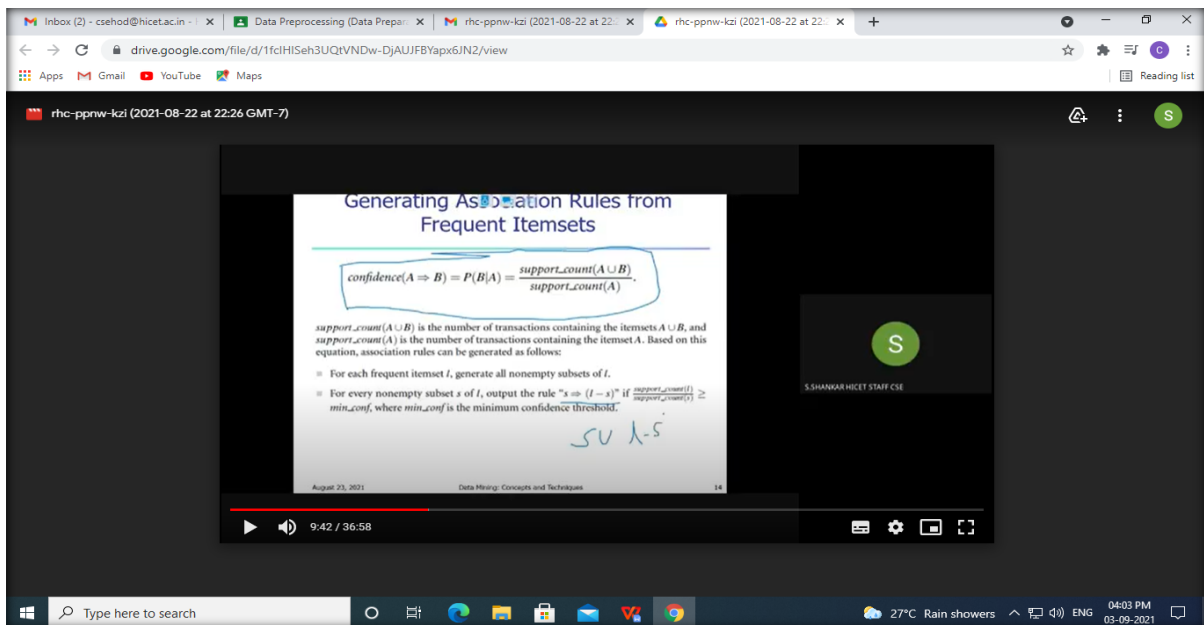
ICT TOOLS			
1	TESTMOZ	19	QUIZALIZE
2	EDUPOZZLE	20	ISPRING FREE
3	FLEXIQUIZ	21	COMMONLIT
4	QUIZWHIZZER	22	PLICKERS
5	KAHOOT	23	GOOGLE CLASSROOM
6	TYPEFORM	24	YOUTUBE
7	QUIZIZZ	25	FREE CAM
8	EDMODO	26	SOCRATIVE
9	INTERACT	27	HOT POTATOS
10	TOPGRADE	28	SCRATCH
11	QUIZLET	29	PREZI
12	GOOGLE FORMS	30	SEESAW
13	ZOOM	31	CLASS DOJO
14	GOOGLE MEET	32	EDUCLIPPER
15	ANIMOTO	33	GOOGLE SLIDES
16	XMIND	34	MINDOMO
17	SHOW ME INTERACTIVE WHITE BOARD	35	THINGLINK
18	IBRAINSTORM	36	COGGLE

Criterion II
Teaching-Learning and Evaluation

Usage of ICT Tools

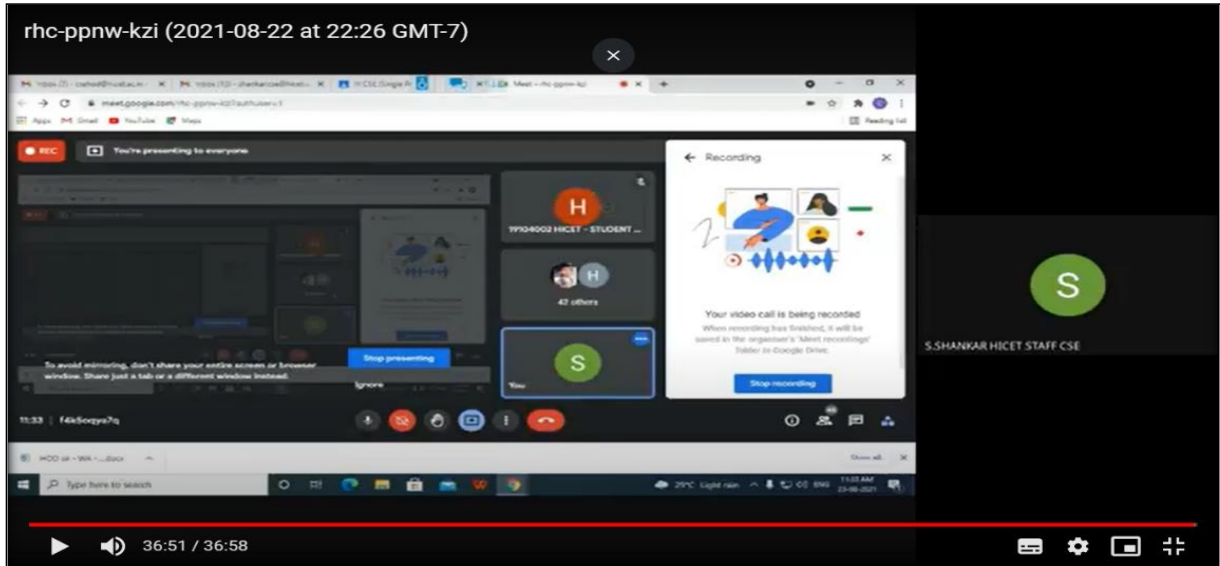
GOOGLE MEET

Google Meet is a video-communication service developed by Google. HiCET has introduced G-Suite Applications of Google. All the faculty members and students use it for effective teaching and learning process.

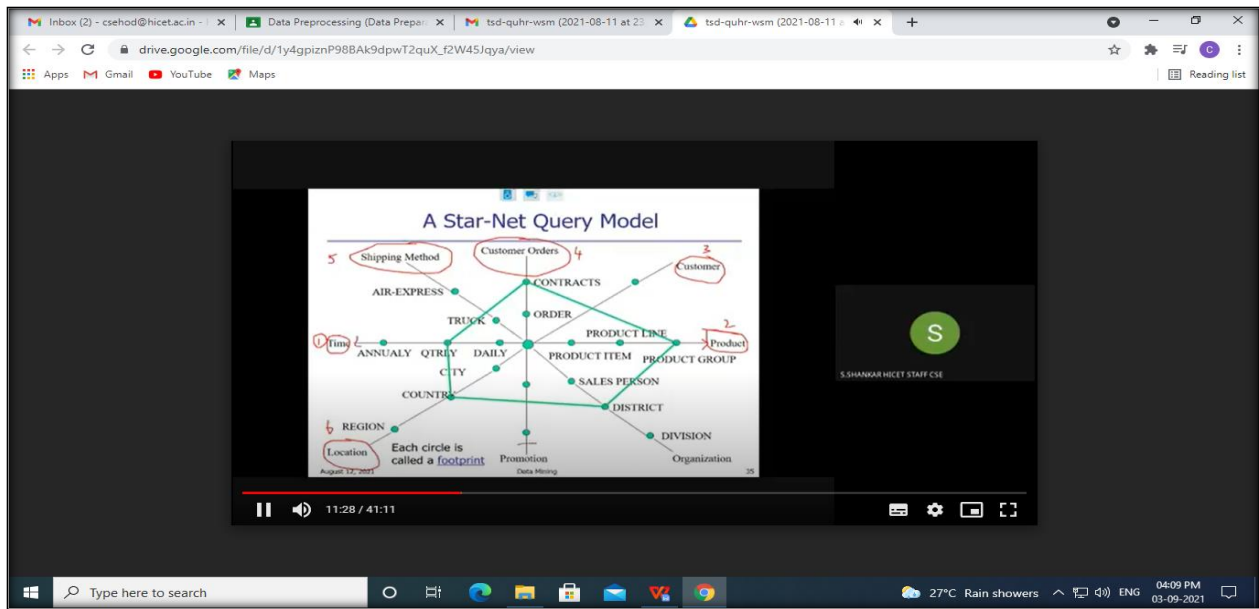


GOOGLE MEET CLASS ROOM FOR DATA MINING SUBJECT

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GOOGLE MEET CLASS ROOM FOR IMAGE PROCESSING SUBJECT



GOOGLE MEET CLASS ROOM FOR OLAP SUBJECT

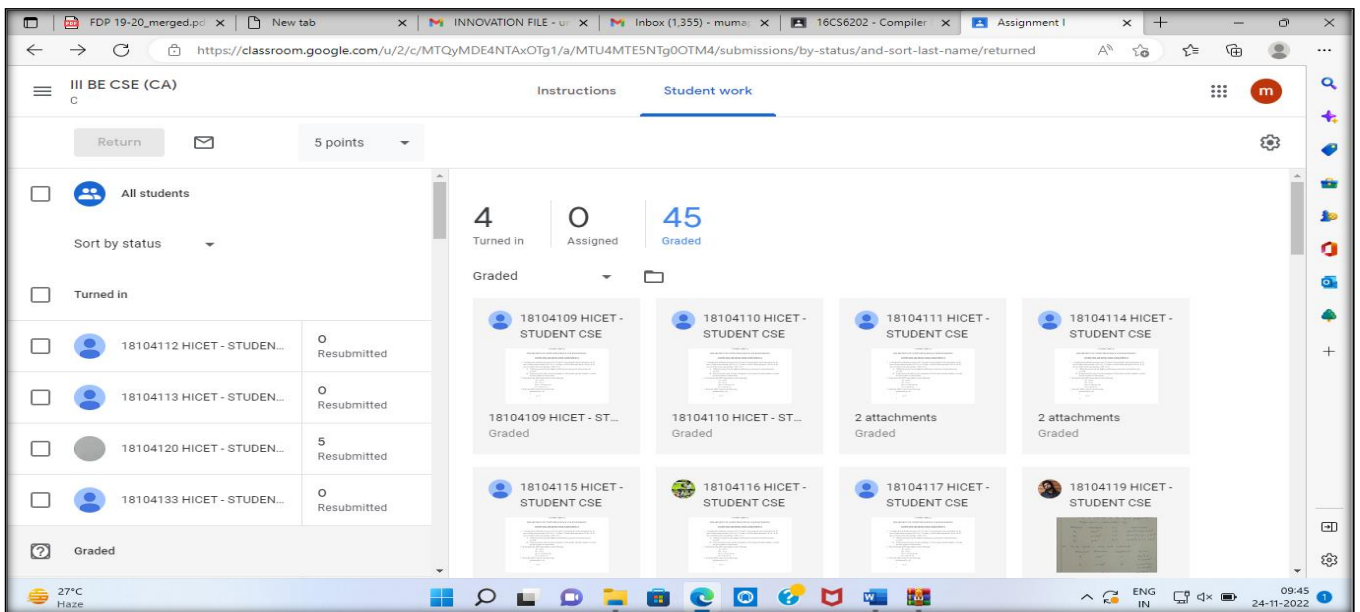
Criterion II Teaching-Learning and Evaluation

GOOGLE CLASSROOM

Google Classroom is a free blended learning platform developed by Google for educational institutions that aims to simplify creating, distributing, and grading assignments. The primary purpose of Google Classroom is to streamline the process of sharing files between teachers and students.

Google Classroom integrates a variety of Google Applications for Education to manage student and teacher communication. Students can be invited to join a class through a private code or be imported automatically from a school domain. Each class creates a separate folder in the respective user's Google Drive, where the student can submit work to be graded by a teacher. Teachers can monitor each student's progress by reviewing revision history of a document, and after being graded, teachers can return work along with comments and grades.

In HiCET, all the Teachers and Students are provided with separate login credentials to use of Google classroom effectively.



GOOGLE CLASSROOM FOR COMPUTER ARCHITECTURE SUBJECT

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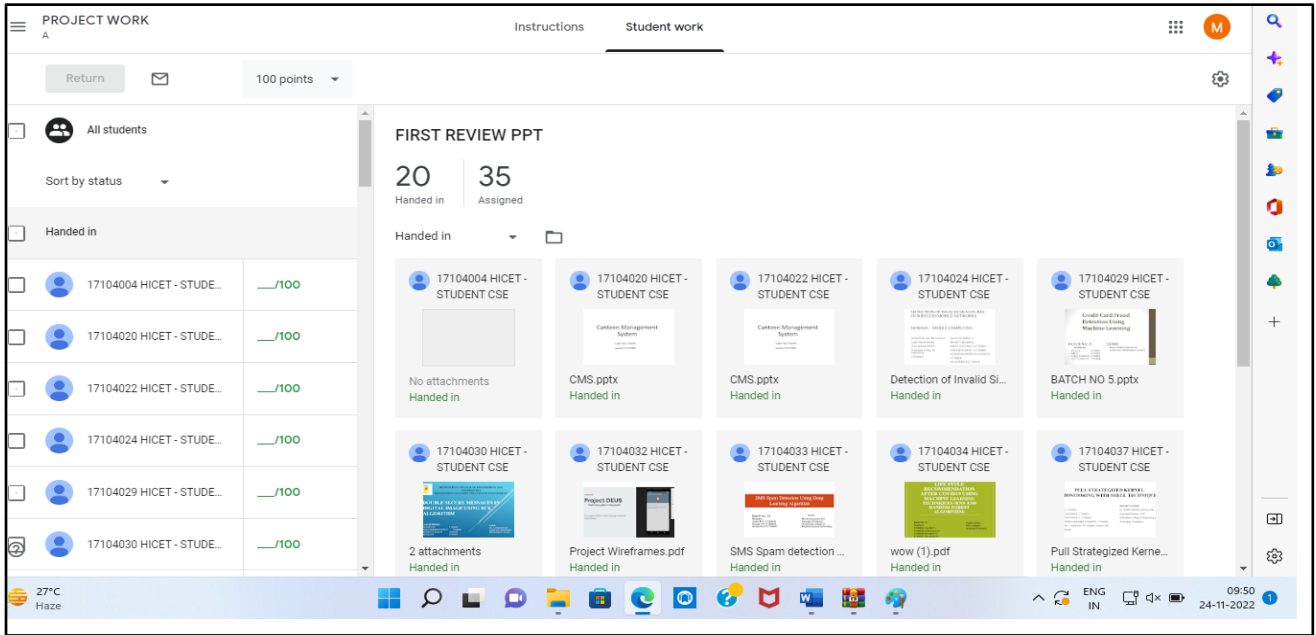
The screenshot shows the Google Classroom interface for a course titled 'IV CSE - MC'. The 'Classwork' tab is active, displaying a list of topics and assignments. The topics listed are 'All topics', 'Book', 'Unit V', 'Unit IV', 'Unit III', 'Unit II', 'Unit I', 'Schedule', and 'Syllabus'. The assignments shown include 'Material for Quick Review' (posted Nov 24, 2020), 'Mobile Computing Quiz' (due Sep 15, 2020, 1:59 PM), 'Book', 'Unit V', and 'Unit IV'. A 'Create' button is visible at the top, along with options for 'Meet', 'Google Calendar', and 'Class Drive folder'.

GOOGLE CLASSROOM FOR MOBILE COMPUTING SUBJECT

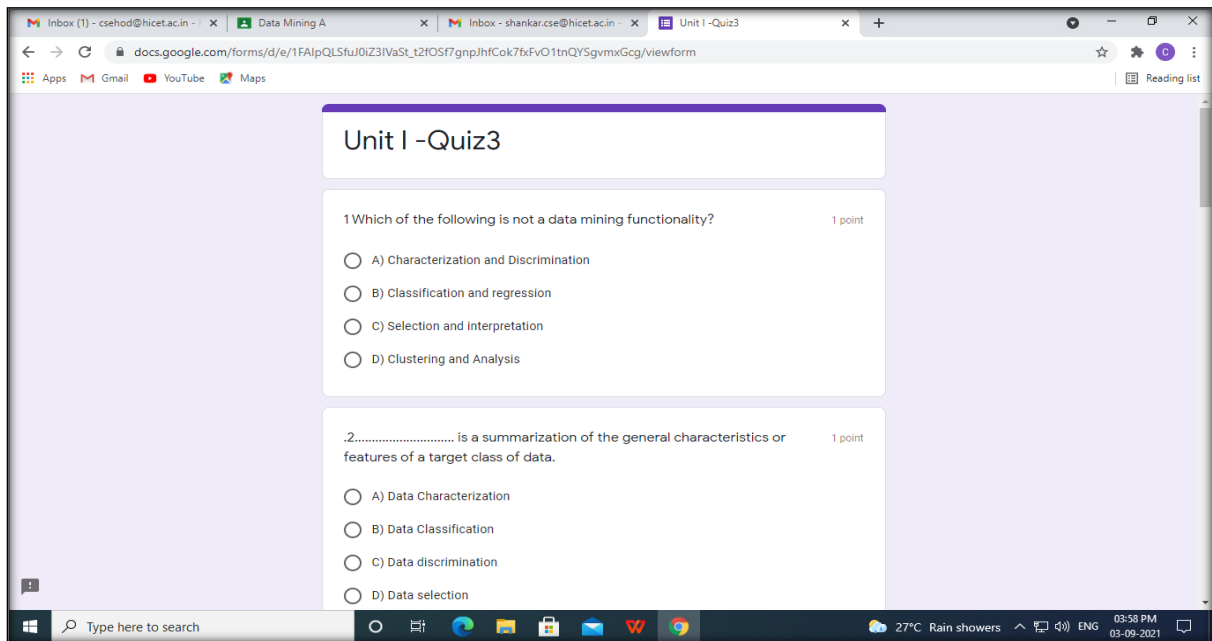
The screenshot shows the Google Classroom interface for a quiz titled 'Mobile Computing Quiz'. The 'Student work' tab is active, displaying a list of students and their quiz status. The quiz is worth 20 points. The status shows 33 students have turned in the quiz and 22 are assigned. The students listed include 17104002 HICET - STUDE... (7 Draft), 17104004 HICET - STUDE... (10 Draft), 17104006 HICET - STUDE... (20 Done late), 17104007 HICET - STUDE... (8 Draft), 17104011 HICET - STUDE... (8 Draft), and 17104014 HICET - STUDE... (9 Draft). The quiz is a Google Forms quiz.

GOOGLE CLASSROOM QUIZ FOR MOBILE COMPUTING SUBJECT

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GOOGLE CLASSROOM FOR PROJECT REVIEW PRESENTATION



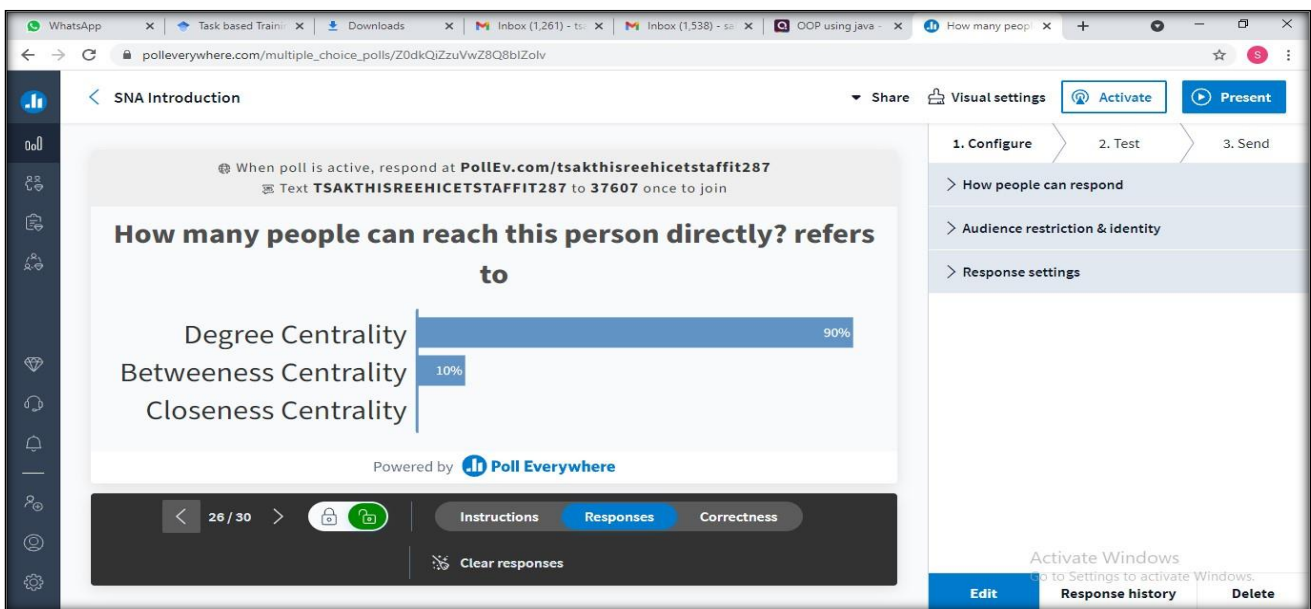
GOOGLE FORM FOR QUIZ ACTIVITY

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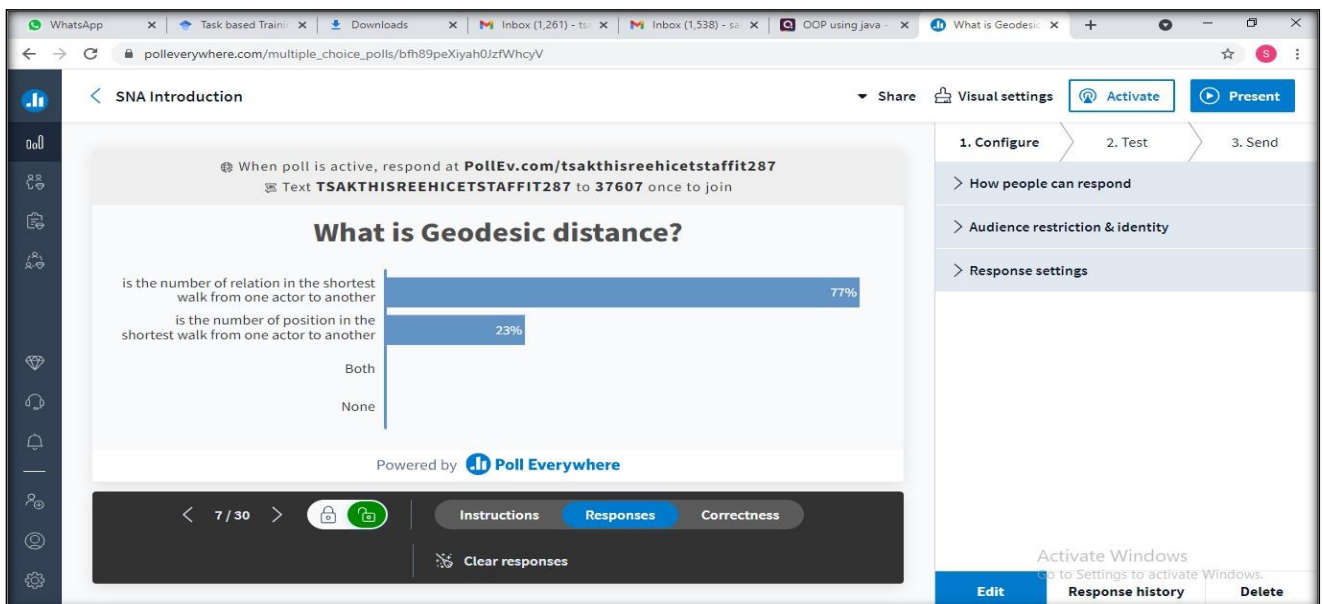
POLL EVERYWHERE

Poll Everywhere is an online tool that fosters live interactive participation. It allows to ask questions of the learners, collect their responses by inviting them to respond through a website or phone text link, and share their collective responses in a variety of formats that update in real-time for everyone to see.

HiCET encourages faculty members and students to engage with learning content in an interactive way, by using this tool.



POLL EVERYWHERE TO ANALYZE THE PERFORMANCE

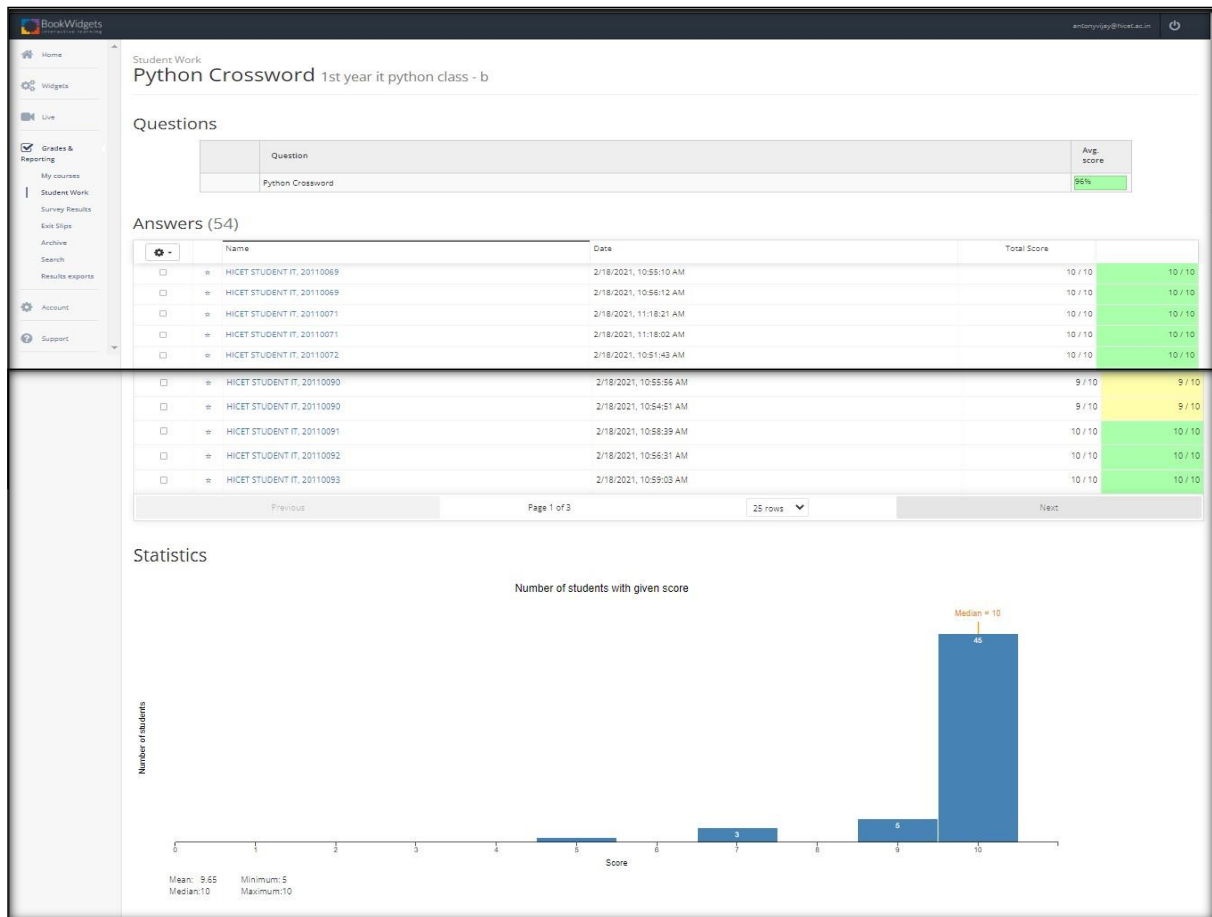


POLL EVERYWHERE TO ANALYZE THE TEST PERFORMANCE OF SNA SUBJECT

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BOOK WIDGETS

Book Widgets is another type of online tool for effective teaching, learning and evaluation. It will allow to create a blended/flipped learning approach with personalized materials that can be easily assigned through Google Classroom.



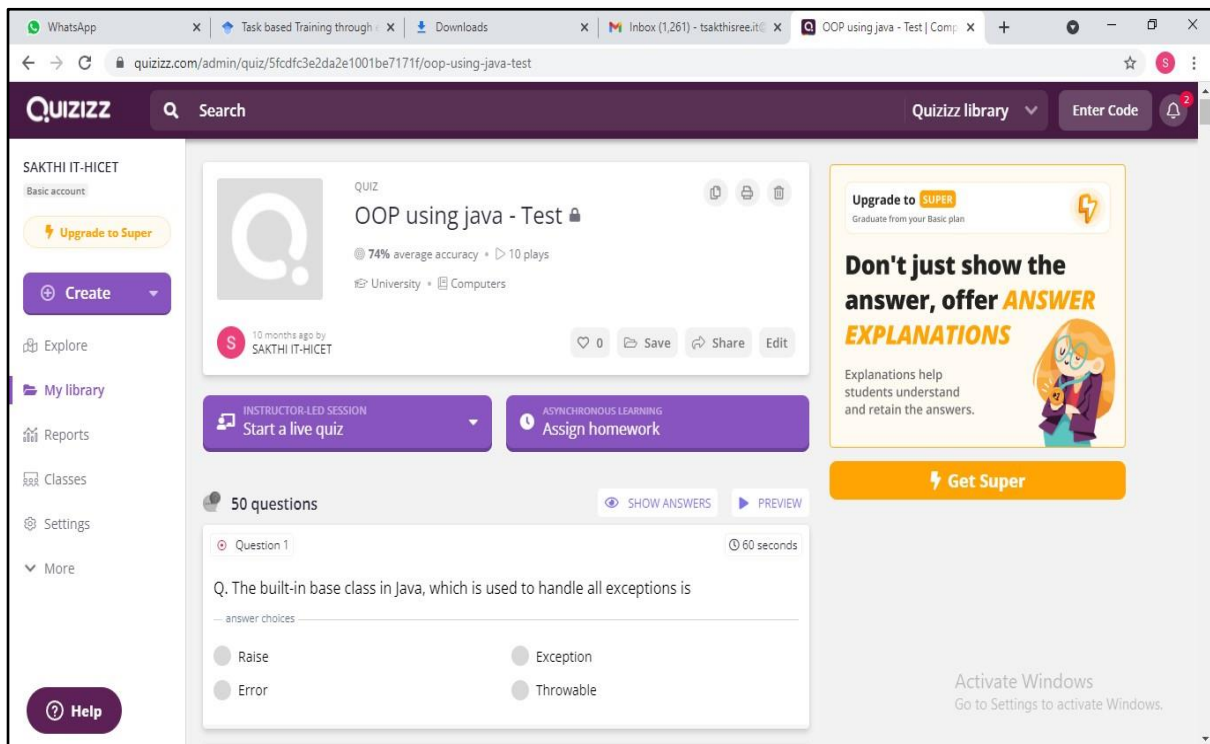
STACTICS ANALYSIS FOR PYTHON SUBJECTS USING BOOK WIDGETS

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QUIZIZZ

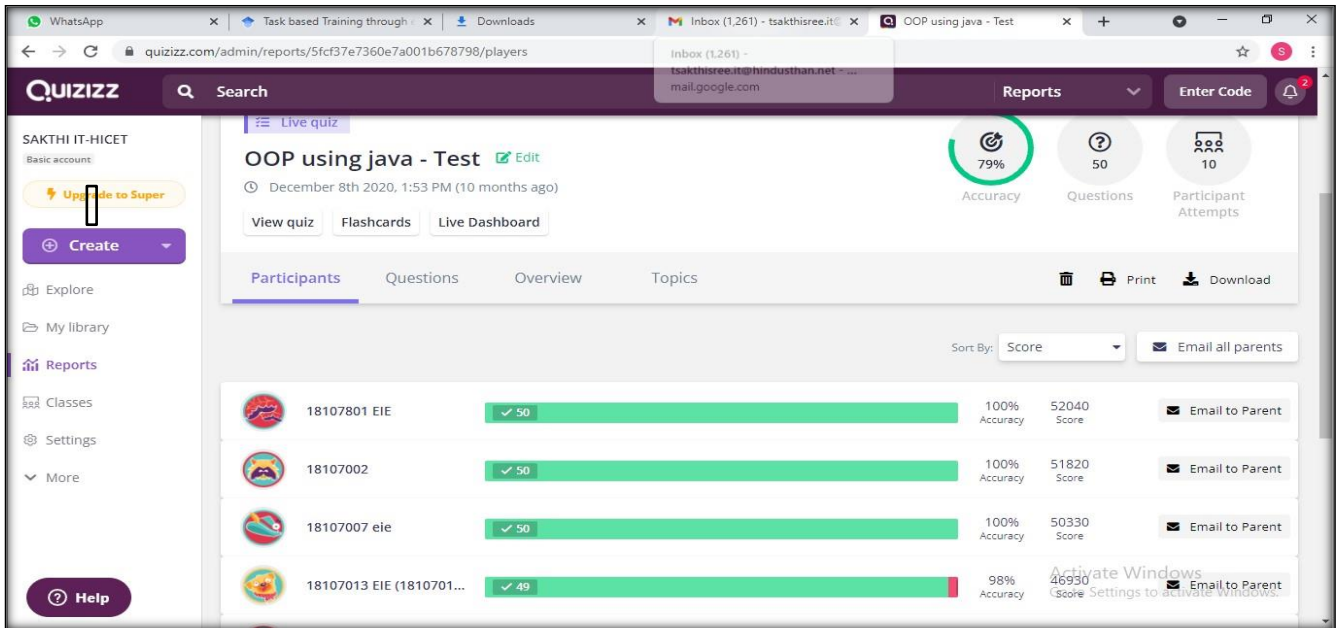
The QUIZIZZ is a quiz based online tool. It motivate everyone to mastery with easy-to-customize content combined with tools for inclusive assessment, instruction, practice to create and enrich their knowledge through quiz.

In HiCET, using this tool to analyze the group assignments, pre-test review, formative assessments and pop quizzes.

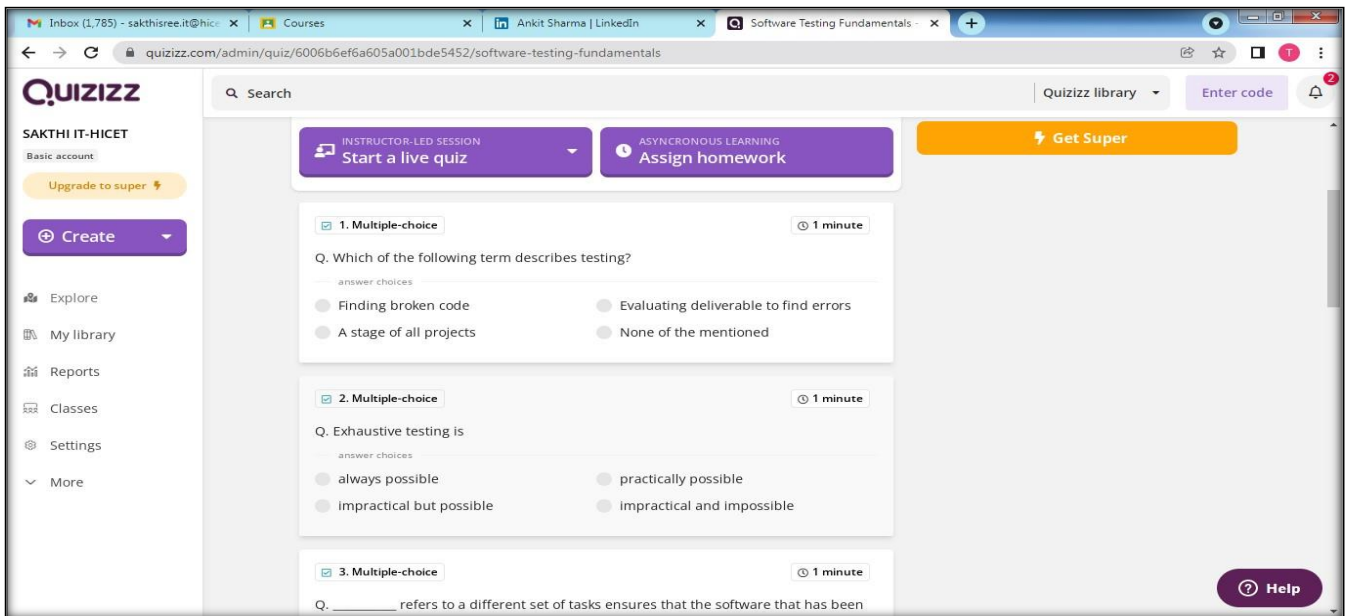


OBJECT ORIENTED PROGRAMMING QUIZZZ

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QUIZZ FOR JAVA PROGRAMMING

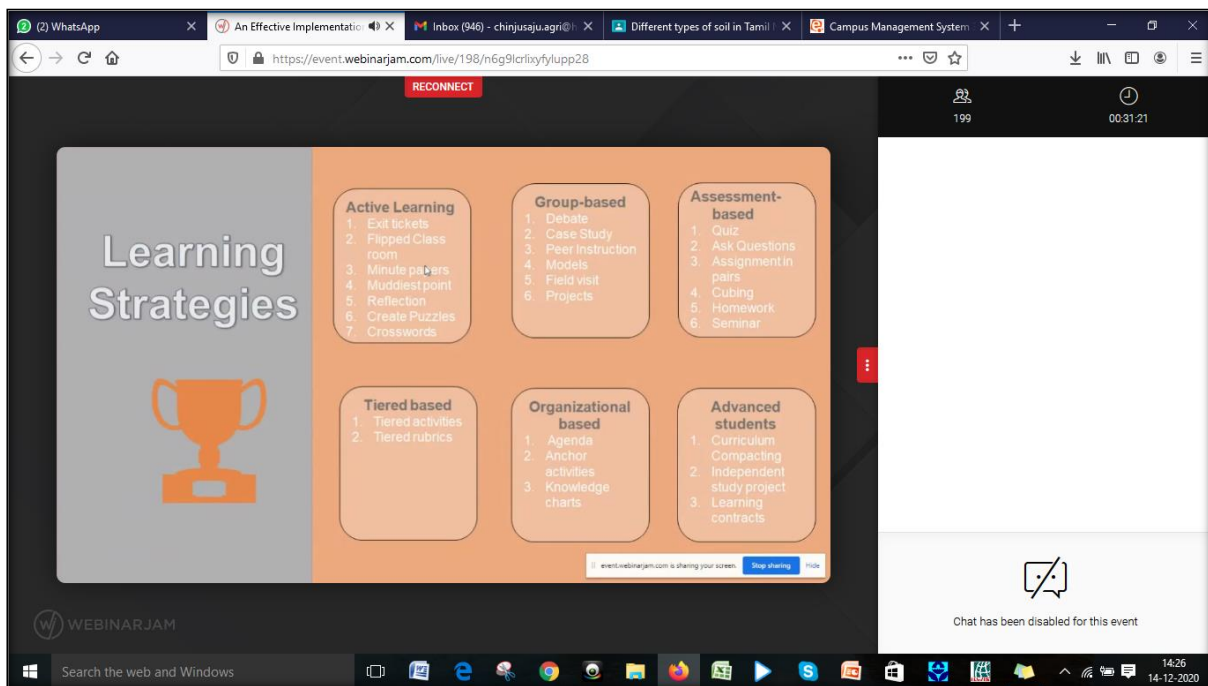


QUIZZ FOR IMAGE PROCESSING

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WEBINAR JAM

Webinar Jam's cloud-based broadcasting technology allows to reach up to 5000 people in one presentation without breaking a sweat. HiCET is having subscription with webinar jam and it connects large number of audience group for live lecture.



WEBINAR JAM FOR ANALAZING LEARNING STATERGIES

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Teaching-Learning and Evaluation

The screenshot shows a webinar interface with a table titled "Mapping Course Outcomes with BTL & POs". The table has five columns: Course Outcomes, Skill, Mapped POs, BTL, and Assessment tools. The content of the table is as follows:

Course Outcomes	Skill	Mapped POs	BTL	Assessment tools
Ability to define, understand and explain the minimization techniques	Remember, Understand	PO1	L1,L2	Exam, Test, Assignment, Quiz
Ability to analyze and apply the minimization techniques to design combinational circuits	Apply, Design, Analyze	PO1, PO2, PO3	L3,L4	Exam, Test, Assignment, Quiz
Ability to design and analyze synchronous sequential circuits	Analyze, Design, Evaluate, Create	PO1, PO2, PO3, PO5, PO9, PO10, PO11, PO12	L3,L4, L5,L6	Exam, Test, Assignment, Mini project
Ability to design and analyze asynchronous sequential circuits	Analyze, Design	PO1, PO2, PO3	L3,L4	Exam, Test, Assignment, Quiz
Ability to define, understand and explain the working principle of semiconductor memories and PLDs	Remember, Understand	PO1, PO10	L1,L2	Exam, Test, Assignment, Seminar

WEBINAR JAM FOR ANALAZING COURSE OUTCOMES

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KAHOOT

Kahoot is a game-based learning platform, used as educational technology. Its learning games, also known as "Kahoots", are user-generated multiple-choice quizzes that can be accessed via a web browser or the Kahoot app. Kahoot also includes trivia quizzes.

Using this tool faculties and students are enjoy the learning.

Nickname	Rank	Correct answers	Unanswered	Final score
Sundar ganapath	1	96%	—	22 406
17108024	2	96%	—	20 858
17108010	3	92%	—	20 409
17108023	4	84%	—	17 466
17108008	5	80%	—	17 457
17104137	6	76%	—	16 803
17110026	7	68%	—	15 481
17104169	8	68%	—	15 038
17104022	9	72%	—	14 270
17104156	10	60%	—	13 709

KAHOOT FOR ORGANIC FORMS REFINEMENT SUBJECT

Criterion II
Teaching-Learning and Evaluation

Name	Date	Game mode	No. of players
INTRODUCTION TO DRONE ASSESSMENT 1	Sep 29 2020, 8:38 pm	Challenge	0
RENEWABLE ENERGY SOURCES AS 1	Sep 25 2020, 10:03 am	Challenge	42
INTRODUCTION TO DRONE ASSESSMENT 1	Sep 5 2020, 10:23 am	Challenge	49
AIRCRAFT STRUCTURES ASSESSMENT 4	Aug 19 2020, 11:15 am	Challenge	31
RENEWABLE ENERGY SOURCES AS 1	Aug 14 2020, 3:03 pm	Challenge	46
AIRCRAFT STRUCTURES ASSESSMENT 2	Aug 12 2020, 3:05 am	Challenge	50
AIRCRAFT STRUCTURES	Aug 10 2020, 3:55 am	Challenge	41
AIRCRAFT STRUCTURES ASSESSMENT	Aug 10 2020, 2:58 am	Challenge	0

KAHOOT FOR AIRCRAFT DRONE ASSESSMENT

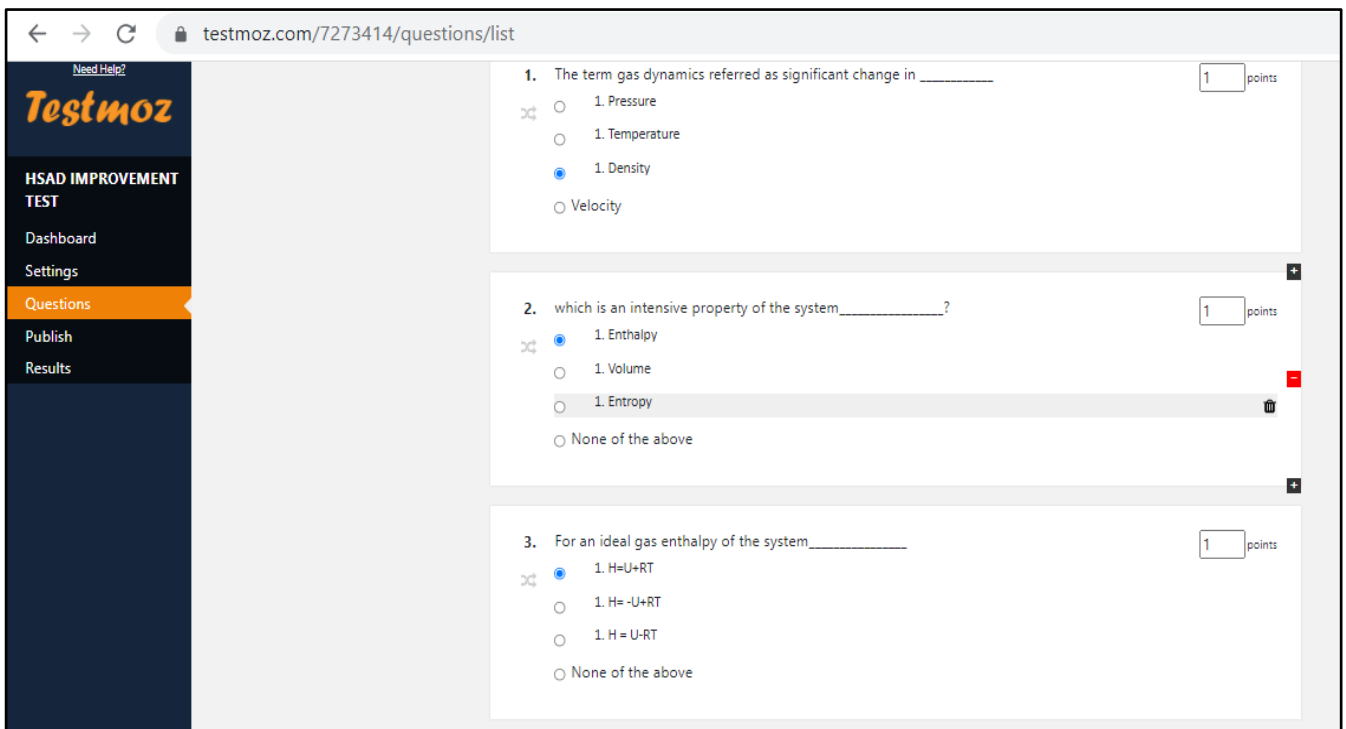
Kahoot Title	Questions	Created	Plays
INTRODUCTION TO DRONE ASSESSMENT 1	25 Questions	Created 1 year ago	2 plays
AIRCRAFT STRUCTURES ASSESSMENT 4	15 Questions	Created 1 year ago	1 plays
RENEWABLE ENERGY SOURCES AS 1	10 Questions	Created 1 year ago	2 plays
AIRCRAFT STRUCTURES ASSESSMENT 2	10 Questions	Created 1 year ago	1 plays

KAHOOT LIBRARY

Criterion II
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TESTMOZ

Testmoz is an excellent web tool that allows to create auto graded tests and quizzes. Testmoz supports different question types including fill in the blank, matching, ordering, short answer, numeric, essay, true/false, and also upload pre-made questions or import them from other tests. In quizzes can include different elements including videos, images, math equations, etc.



TESTMOZ FOR HSAD IMPROVEMENT TEST

Criterion II
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EXAMLY

Examly is an online assessment platform. This is support for online access of objective type and multiple choice-based questions.

In HiCET, subscription with Examly, creates compelling content with our simple user interface. This is followed by sharing the right content to the right candidates to make sure they are learning and growing in the right way. And finally, assess their progress, with detailed reports to make the right decisions at the right time.

The screenshot displays the Examly interface for a completed exam. The browser address bar shows the URL: hiket902.examly.io/mycourses/details?id=97b22a56-675b-4d9b-a96d-549ad5456571&type=mycourses. The page title is '19EI5201 IND INSTU II- ODD21-INT 1'. The exam status is 'Completed' with a '100%' progress indicator. The exam details are as follows:

Questions	Sections	Duration	Marks
50	02	60 m	60

Additional details shown include: Attempts: 01/01, Proctoring: No, and a table of section marks:

Name	Questions	Durations	Marks
UNIT 1	25	30 m	30
UNIT 2	25	30 m	30

The interface also shows 'Test Completed' in green, 'Start Before: 16 Aug 2021 | 11:00 AM (GMT+05:30)', and 'View Instructions'.

EXAMLY FOR MICROPROCESSOR AND MICROCONTROLLER SUBJECT



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MECH, EEE, IT & CSE)
Coimbatore - 641 032.



DEPARTMENT OF AERONAUTICAL ENGINEERING

Subject code / Name : 22AE4201 / Aerodynamics- I
Year & Semester : IV / EVEN
Academic Year : 2023 - 2024
Semester : 04
Name of ICT tools used : QUIZIZZ

Dashboard:

The screenshot shows the Quizizz interface for a quiz titled "Aerodynamics Quiz". The quiz is categorized as "University grade" and "Science", with a 57% accuracy rate and 1 play. It was created by saravanan ramas... 3 months ago. The dashboard includes options for "Worksheet", "Save", "Share", and "Edit". Below the quiz details, there are three purple buttons: "Start a live quiz" (Instructor-led session), "Assign homework" (Asynchronous learning), and "Paper mode" (No devices needed). The quiz contains 25 questions, and the first question is a multiple-choice question: "What is aerodynamic?". The question has three answer choices: "Car speed", "The car body", and "The way air moves around things". The correct answer is "The way air moves around things". The question is set for 30 seconds and is worth 1 point.

QUIZIZZ

Quiz Name

Aerodynamics Quiz

Date

Tue Jun 18 2024 9:26 AM

Hosted by

saravanan ramasamy

Average Accuracy

85%

Total Questions

25

Number of Players

37

Participant Attempts

40

 This report displays results derived from the students' all attempts.

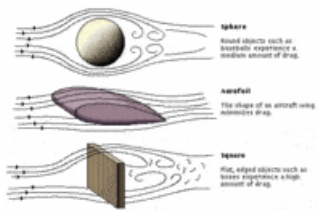
Questions

No.	Question	Time	Accuracy	Responses		
				Correct	Incorrect	Unattempted
1	What is aerodynamic ?	19 secs	93%	37	0	3
2	Which shape is a good aerodynamic	11 secs	93%	37	0	3
3	Which vehicle has low speed ?	14 secs	90%	36	1	3
4	What is the force that allows a plane to get off the ground?	20 secs	83%	33	4	3
5	What is it called when you design an aircraft in a way in which it reduces drag?	31 secs	57%	23	14	3
6	In order to move forward, you must have more thrust than _____ to fly.	17 secs	90%	36	1	3
7	What does this image represent?	18 secs	80%	32	5	3
8	Why does a candle go out when you place a jar over top of it?	19 secs	90%	36	1	3
9	Theory 3 - The faster air moves, the lower the _____.	28 secs	83%	33	4	3
10	The air _____ a wing tends to move faster than the air below it.	31 secs	85%	34	3	3
11	Air is considered a...	12 secs	90%	36	1	3
12	_____ pulls the plane downward and objects are pulled toward the center of the Earth.	20 secs	88%	35	2	3
13	_____ air moves faster over the wing meaning slower moving air underneath pushes the plane up	40 secs	83%	33	4	3
14	The four forces that enable flight are:	30 secs	90%	36	1	3
15	In order to move forward, you must have more thrust than _____ to fly.	19 secs	83%	33	4	3
16	This is the name of the force that tries to move an aircraft forward.	19 secs	90%	36	1	3
17	Downforce is the opposite of lift.	13 secs	85%	34	3	3
18	Why is the science of aerodynamics important to racing?	43 secs	83%	33	4	3
19	A perfectly flat wing is able to easily create enough lift to fly a plane.	41 secs	80%	32	5	3
20	This is the name of the force that tries to hold an aircraft back.	22 secs	90%	36	1	3

No.	Question	Time	Accuracy	Responses		
				<i>Correct</i>	<i>Incorrect</i>	<i>Unattempted</i>
21	Which is the force which opposes(IS OPPOSITE TO) weight / gravity?	42 secs	85%	34	3	3
22	Bernoulli's principle helps describe which of the following forces	27 secs	85%	34	3	3
23	What are the 2 types of drag? (select 2)	48 secs	68%	27	10	3
24	What are the 4 forces in flight	23 secs	93%	37	0	3
25	Hot Air Balloons work because	25 secs	88%	35	2	3

Appendix - Images

2.



Which shape is a good aerodynamic

4.



What is the force that allows a plane to get off the ground?

5.



What is it called when you design an aircraft in a way in which it reduces drag?

6.



In order to move forward, you must have more thrust than _____ to fly.

7.



What does this image represent?

8.



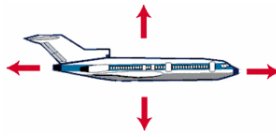
Why does a candle go out when you place a jar over top of it?

15.



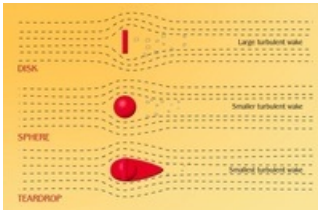
In order to move forward, you must have more thrust than _____ to fly.

20.



This is the name of the force that tries to hold an aircraft back.

23.



What are the 2 types of drag? (select 2)

QUIZZZ

Quiz Name

Aerodynamics Quiz

Date

Tue Jun 18 2024 9:26 AM

Hosted by

saravanan ramasamy

Average Accuracy

85%

Questions per Attempt

25

Number of Players

37

 This report displays results derived from the students' best attempts.

Players

Rank	Player Name	Avg. Time	Points	Accuracy	Correct
1	Pranav M S	50 secs	25	100%	25 / 25
2	Dharsha	22 secs	25	100%	25 / 25
3	Nithya L	29 secs	25	100%	25 / 25
4	Vishali.P	41 secs	25	100%	25 / 25
5	Saroon jose o.s	11 secs	25	100%	25 / 25
6	Arunkumar	7 secs	25	100%	25 / 25
7	LOKESH M	23 secs	25	100%	25 / 25
8	Dinesh.K	70 secs	25	100%	25 / 25
9	HARIKESH T	33 secs	25	100%	25 / 25
10	Priya	31 secs	25	100%	25 / 25
11	720722101033	15 secs	25	100%	25 / 25
12	Rubesh Kumar K	28 secs	25	100%	25 / 25
13	DEEPAK MURTHY S	17 secs	25	100%	25 / 25
14	Siva S	12 secs	25	100%	25 / 25
15	ABHILASH S	32 secs	25	100%	25 / 25
16	AHIM S A	12 secs	25	100%	25 / 25
17	Pranav S V	9 secs	25	100%	25 / 25
18	RAGURAMRAJ S	19 secs	24	96%	24 / 25
19	ANISH BAGULEYAN M	26 secs	24	96%	24 / 25
20	Thanushmathi	8 secs	24	96%	24 / 25
21	Arunkumar P	10 secs	23	92%	23 / 25
22	Angelin Persini M	25 secs	23	92%	23 / 25
23	Sivaram Y	12 secs	23	92%	23 / 25
24	Sajina	47 secs	23	92%	23 / 25
25	Saran M S	11 secs	23	92%	23 / 25
26	Hariharan V	20 secs	22	88%	22 / 25
27	PRAVEEN A	12 secs	22	88%	22 / 25
28	Aron Geevarghese K G	67 secs	22	88%	22 / 25

Rank	Player Name	Avg. Time	Points	Accuracy	Correct
29	KARTHIKEYAN A	24 secs	22	88%	22 / 25
30	Balachandiran K	41 secs	21	84%	21 / 25
31	Sivabalan S	27 secs	21	84%	21 / 25
32	K Rohith Kumar	15 secs	21	84%	21 / 25
33	Farhan mohammed p	12 secs	20	80%	20 / 25
34	B.Ram prakash	15 secs	17	68%	17 / 25
35	Kirubalan S	25 secs	17	68%	17 / 25
36	Antony packia roshan I	42 secs	16	64%	16 / 25
37	Abishek Sam	36 secs	15	60%	15 / 25



Hindusthan College of Engineering and Technology

Department of Automobile Engineering

NAME OF THE FACULTY	PRABHU.G
DESIGNATION	ASSISTANT PROFESSOR
COURSE CODE & NAME	21AU5203 & AUTOMOTIVE FUELS AND LUBRICANT
YEAR & SEMESTER	III & V
ACADEMIC YEAR & SEM	2023 – 2024 ODD SEM
BATCH	2021 - 2025

LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
1.	7/8/23	3	Department Vision Mission, PFO, PSO	Lect	PPT	
		UNIT-1				
2.	8/8/23	7	Introduction to the Subject & CO'S	Lect	PPT	
3.	9/8/23	2	Classifications of Jules	Lect	PPT	
4.	11/8/23	5	Thermal Cracking, Catalytic Cracking	Lect	BB	
5.	12/8/23	1	Polymerization & Alkylation	Lect	BB	
6.	16/8/23	2	Isomerization and blending	Lect	PPT	
7.	18/8/23	5	Blending	Lect	BB	
8.	19/8/23	1	Petroleum Refining Process	Lect	PPT	
9.	22/8/23	2	Manufacturing of lubricating oil base stocks	Lect	PPT	
10	23/8/23	2	Manufacturing of lubricating oil base stocks	Lect	PPT	9hrs
		UNIT-2	THEORY OF LUBRICATION			
11	25/8/23	3, 5	Introduction to Engine friction	Lect	BB	
12	26/8/23	1	Mechanical Efficiency	Lect	BB	
13	30/8/23	2	Mechanical Friction	Lect	BB	

LESSON PLAN

S.No.	Date / Class Handled	Date / Class Handled	Topic Covered	Teaching Method	Teaching Aide	Remarks
14	01/9/23	1	Blow by losses	Lect	PPT	
15	01/9/23	5	Theory of Lubricants	Lect	PPT	
16	2/9/23	1	Mechanism of friction	Lect	BB	
17	8/9/23	5	Boundary & Bearing Lubricants	Lect	BB	
UNIT						
18	8/9/23	3,5	Hydrodynamic Lubricants	Lect	BB	
19	12/9/23	7	Revision	Lect	BB	10 hrs
UNIT-3			LUBRICANTS			
20	13/9/23	2	Specific Requirements of Aviation Fuels	Lect	PPT	
21	15/9/23	3	oxidation, deterioration	Lect	PPT	
22	15/9/23	5	Degradation of Lubricants	Lect	PPT	
23	19/9/23	7	Additives	Lect	BB	
24	20/9/23	2	Additives Mechanism	Lect	BB	
25	22/9/23	3	Revision	Lect	PPT	
26	22/9/23	5	Classification of Lubrication oils	Lect	BB	
27	28/9/23	1	Properties of Lubrication oils	Lect	BB	
28	26/9/23	6	Tests on Lubricant	Lect	BB	
29	27/9/23	2	Classification of Grease	Lect	PPT	
30	7/10/23	2	Revision	Lect	PPT	11 hrs
UNIT-4			COMBUSTION OF FUELS			
31	18/10/23	2	Introduction	Lect	BB	



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AUTO, CIVIL & MECT)

Coimbatore - 641 032.



DEPARTMENT OF AERONAUTICAL ENGINEERING

Subject code / Name : 21AE5201/ Advanced Propulsion
Year & Semester : III / Odd
Academic Year : 2023 - 2024
Semester : 05
Name of ICT tools used : Testmoz



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AUTO, CIVIL & MECT)

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DEPARTMENT OF AERONAUTICAL ENGINEERING

Dashboard:

21AE5201 Dashboard

This is the control panel where you can adjust settings, add questions, publish the test, and view results.

Tasks

0. **Bookmark this page and write down your password**
It is absolutely critical that you do this! There is no way to recover the URL or password.
1. **Adjust settings**
Change the test name, description and what happens after the test is graded.
2. **Edit questions** ✓
It's not much of a test if it doesn't have questions.
3. **Publish & distribute** ✓
Publish your test, distribute it to your students and start collecting results.
4. **View results** ✓
See how well your students did on the test.

Test Utilities

- Clone**
Create a duplicate copy of this test.
- Share**
Share a copy of this test with a co-worker or colleague.
- Clear Result Data**
Clear out the data on the Results page.
- Change Admin Password**

Questions:

Questions

This test has 10 items (10 graded questions) with 10 points possible. Questions will be shuffled during the test.

1. Mostly the type of nozzles used in a ramjet engine is. 1 points
 Conical nozzle
 C-D nozzle
 Divergent nozzle
 Bell nozzle
2. For an ideal rocket, what should be the nature of the working substance? 1 points
 Homogeneous
 Heterogeneous
 Anisotropic
 Amorphous
3. Which of the following is not an annular nozzle? 1 points

Graded | Ungraded | Other

Multiple Choice | Multiple Response | True/False | Fill in the Blank | Matching/Ordering | Numeric | Short Answer | Easy | File Upload

Mark Statement:

S.No	Register Number / Name	Total Questions	Correct Answers	Total Percentage
1.	720721101001	10	6	60
2.	720721101017	10	10	100
3.	720721101018	10	10	100
4.	720721101020	10	6	60
5.	720721101025	10	9	90
6.	720721101031	10	5	50
7.	720721101033	10	6	60
8.	720721101044	10	7	70
9.	720721101052	10	7	70
10.	720721101059	10	9	90
11.	720721101060	10	7	70
12.	Ahamed yasin	10	3	30
13.	AJAY E	10	10	100
14.	Ancilin prasad.F	10	7	70
15.	ARMEN RIJO S	10	7	70
16.	Aruselvan	10	10	100
17.	Ashna Antony	10	3	30
18.	Ashok.K.S	10	7	70
19.	Bhagavathi S	10	9	90
20.	Bharanidharan	10	9	90
21.	BHARATHI T	10	10	100
22.	Dhanish L	10	7	70
23.	Dhilip kumar. S	10	3	30
24.	Dinesh Kumar M	10	8	80
25.	DON C ABIHAIL	10	10	100
26.	GAJENDIRAN I	10	10	100
27.	GODWIN V	10	8	80
28.	HARIVASANTH P	10	10	100
29.	Jagan J	10	7	70
30.	Janaki.R	10	10	100
31.	Jisna Joy	10	5	50
32.	Kamalesh	10	8	80
33.	KRISHNAPRASAD P B	10	8	80
34.	mohamed rashith	10	3	30
35.	Mohamed yasin	10	8	80
36.	Mohammed Hashir	10	8	80
37.	Mohammed Ismail.S	10	10	100
38.	muhammed roshan	10	10	100
39.	Mukunthan	10	7	70
40.	navin babu	10	7	70
41.	NAVINKUMAR A	10	9	90
42.	Nidhin Samuel	10	8	80
43.	prabhakaran	10	10	100
44.	Praveen (47)	10	9	90
45.	RAGUL V	10	9	90

46.	RENITH S	10	8	80
47.	RIZVAN UMMER	10	7	70
48.	RUPESH	10	8	80
49.	s.Athilakashmi	10	10	100
50.	Shyam kumar	10	8	80
51.	Subash s	10	8	80
52.	SURYA	10	10	100
53.	V Praveen	10	9	90
54.	Vairavan	10	10	100
55.	VEERAMANI J	10	8	80
56.	Vetrivel	10	8	80

AL

Faculty Incharge

[Signature]
HOD/Aero

GOOGLE CLASSROOM FOR BATCH 2022-2026

The screenshot shows the Google Classroom interface for the 'Batch 2022-26 Chemical Engineering' class. The left sidebar contains navigation options: Home, Calendar, Teaching (To review, Batch: 2022-2026, Batch: 2020-2024, Batch: 2021-2025, 114 IV CHEM Batch 2020-2..., Batch 2022-26 Chemical Engineering, Batch 2021-25 V Semester, Batch 2021-25), and Archived classes. The main content area is titled 'Stream' and features a banner for 'Batch 2022-26 Chemical Engineering' with a 'Customise' button. Below the banner, there are several activity cards: a 'Meet' card with a 'Generate link' button, a 'Class code' card showing 'u3npj3', and two announcement cards from 'KALPANA.V.P HICET CHEMICAL FACULTY' and 'dineshkumar HICET STAFF CHEMICAL' regarding unit notes and internal marks.

The screenshot shows the 'To review' page in Google Classroom. The left sidebar is similar to the first screenshot but highlights the 'To review' section. The main content area shows a list of assignments with columns for 'No due date', 'Work in progress', and 'Reviewed'. The assignments are as follows:

Assignment	No due date	Work in progress	Reviewed
19CH8205 - PE 114 IV CHEM Batch 2020-24 (Honors Class) • Due 14 M...	0 Handed in	4 Assigned	0 Marked
Classification of Dryers and their types (Expla... Batch: 2022-2026 • Due 13 May 2024	28 Handed in	31 Assigned	0 Marked
19CH8206 114 IV CHEM Batch 2020-24 (Honors Class) • Due 11 M...	0 Handed in	4 Assigned	0 Marked
19CH8206 114 IV CHEM Batch 2020-24 (Honors Class) • Due 14 M...	4 Handed in	0 Assigned	0 Marked
19CH8205 114 IV CHEM Batch 2020-24 (Honors Class) • Due 13 M...	0 Handed in	0 Assigned	4 Marked
19CH8204	4 Handed in	0 Assigned	0 Marked

GOOGLE CLASSROOM FOR SUBJECT MASS TRANSFER-I

Drying

*- Drying is commonly the **last stage** in a manufacture process.
 *- Drying is the final **removal of water** from material (usually by heat)
Non-thermal drying * 1- As Squeezing wetted sponge
 2- Adsorption by desiccant (desiccation) 3- Extraction.

Purposes of drying

- In pharmaceutical technology, drying is carried out for one or more of the following reasons:

- 1- To avoid or eliminate moisture which may lead to **corrosion** and decrease the product or **drug stability**.
- 2- To **improve** or keep the **good properties** of a material, e.g. **flowability**, compressibility.
- 3- To **reduce** the cost of **transportation** of large volumes of **liquids**.
- 4- To make the **material easy** or more suitable for **Preservative**.
- 5- **Preservative**.
- 6- The final step in: Evaporation- Filtration- Cr

Page 1 / 55

Difference between drying and evaporation

- 1- In **drying** processes, the main operation usually carried out on **solid materials**, e.g. powders, or products.
- 2- **Drying** in most of the cases means the removal of relatively **small amounts of water from solids**. **Evaporation** include the **removal of large amounts of water from solutions**.
- 3- In most cases, **drying** involves the **removal of water at temperatures below its boiling point**, whereas **evaporation** means the **removal of water by boiling a solution**.
- 4- In **drying**, **water** is usually removed by **circulating air over the material** in order to **carry away the water vapour**, while in **evaporation**, water is removed from the material as **pure water vapour mixed with other gases**.

Classification of Various Types of Dryers

Parameter	Batch	Continuous
Storage dryer	Bin dryer	-
Fixed tray dryer	Cabinet tray dryer	Tunnel dryer
Drying under vacuum	Vacuum shelf dryer	Continuous belt dryer
Moving bed dryer	Agitated pan dryer	Pneumatic conveyor bed dryer
	Tumble dryer	
Roller dryer	Wet-disk bed dryer	Screw conveyor dryer
	-	Belt conveyor dryer
Product in suspension	Fluidized bed dryer	LSU ¹ dryer
		Drum dryer
		Rotary dryer
		Fluidized bed dryer
Freeze dryer	Batch freeze dryer	Pneumatic dryer
		Rotary dryer
		Spray dryer
		Continuous freeze dryer


¹LSU: dryer Louisiana State University dryer

Drum Dryer (Film Drying)

https://www.youtube.com/watch?v=tE950C_Mx2M

- It consists of a drum of about 0.75-1.5 m in diameter and 2-4 m in length, **heated internally**, usually by **steam**, and **rotated** on its longitudinal axis.
- **Operation:** The liquid is applied to the surface and **spread** to a film, this may be done in various ways, but the simplest method is that shown in the diagram, where the **drum dips into a feed pan**. Drying rate is controlled by using a suitable speed of **rotation** and the **drum temperature**. The product is **scraped** from the surface of the drum by means of a **doctor knife**.

Fig. Drum dryer




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Department of Chemical Engineering

19CH7202 – PROCESS EQUIPMENT DESIGN

ICT Tools

Google Slides

The screenshot shows a Google Slides presentation titled "PRESSURE VESSELS". The main slide is titled "Introduction to Pressure Vessels" and contains the following text:

- Pressure vessels are containers for fluid under high pressure.
- In other words pressure vessels are the containers or envelop in which material are processed, treated or stored which has been designed operate at pressure above 15 psi.
- Applications of pressure Vessel:
 - Petroleum refining
 - Chemical
 - Power
 - Food and beverage
 - Pharmaceutical
 - Nuclear reactors
 - Submarine

There are two images of pressure vessels on the right side of the slide.

The screenshot shows a Google Slides presentation titled "Heat EXCHANGER". The main slide is titled "SHELL AND TUBE HEAT EXCHANGE" and contains the following text:

- These are most widely used types of heat exchanger. The equipment consist of a number tubes enclosed in a relatively closed fitting cylindrical shell.

Below the text is a diagram of a shell and tube heat exchanger with labels for "Tube Sheet", "Tube", "Shell", and "Tube Sheet".

EduPuzzle

edupuzzle

Video Preview

Process design of Heat Exchangers

Overall Temperature Difference

$$\Delta T_m = F \cdot \Delta T_{lm}$$
$$F = \frac{\Delta T_1 - \Delta T_2}{\ln \left(\frac{\Delta T_1}{\Delta T_2} \right)}$$

where ΔT_1 and ΔT_2 are the terminal temperature differences (K)

$$R = \frac{T_1 - T_2}{T_3 - T_4} \quad S = \frac{T_2 - T_1}{T_4 - T_3}$$

edupuzzle

Video Preview

Process design of Heat Exchangers

Calculate the shell side equivalent diameter

- For square pitch arrangement
- For triangular pitch arrangement

$$d_{se} = \frac{1.27}{d_o} (p)^2 = 0.785 d_o^2$$
$$d_{se} = \frac{1.1}{d_o} (p)^2 = 0.907 d_o^2$$

Calculate shell side Reynolds number

$$Re_s = \frac{d_{se} G_s}{\mu}$$

E CONTENT FOR SUBJECT PROCESS EQUIPMENT DESIGN

21CH7201-PROCESS EQUIPMENT DESIGN

UNIT-II- ROTARY EVAPORATOR

Mr. NAGUL DEV S

ASSISTANT PROFESSOR

DEPARTMENT OF CHEMICAL ENGINEERING

HINDUSTHAN COLLEGE OF ENGINEERING & TECHNOLOGY



Principles of Rotary Evaporator

- The principle of rotary evaporation is to distill volatile solutions by heating and increasing the surface area available for distillation.
- To enhance the efficiency of the process, a rotary evaporator is typically connected to a vacuum pump to create a vacuum, thereby reducing the boiling point of the solution.
- The principle of a rotary evaporator is that as the vacuum in the evaporating flask increases, the boiling point of the liquid inside decreases.
- With a sufficiently low vacuum level, even high-boiling point solvents such as water (boiling point at standard atmospheric pressure 100°C), dimethylformamide (153°C), and dimethyl sulfoxide (189°C) can be distilled.

Advantages

- **Quicker:** Due to the inertia and friction between the liquid and the rotating flask, the liquid spreads across the inner surface of the flask, forming a thin liquid film. This increased surface area facilitates more efficient distillation, resulting in faster concentration.
- **Reduced bumping:** The liquid film mentioned earlier also helps to prevent bumping during the procedure. By maintaining a uniform and continuous liquid film, the likelihood of sudden bursts or violent boiling, which can lead to sample loss or contamination, is minimized.




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NDT QUIZ



Questions

Responses 30

Settings

Total points: 25

720721109014

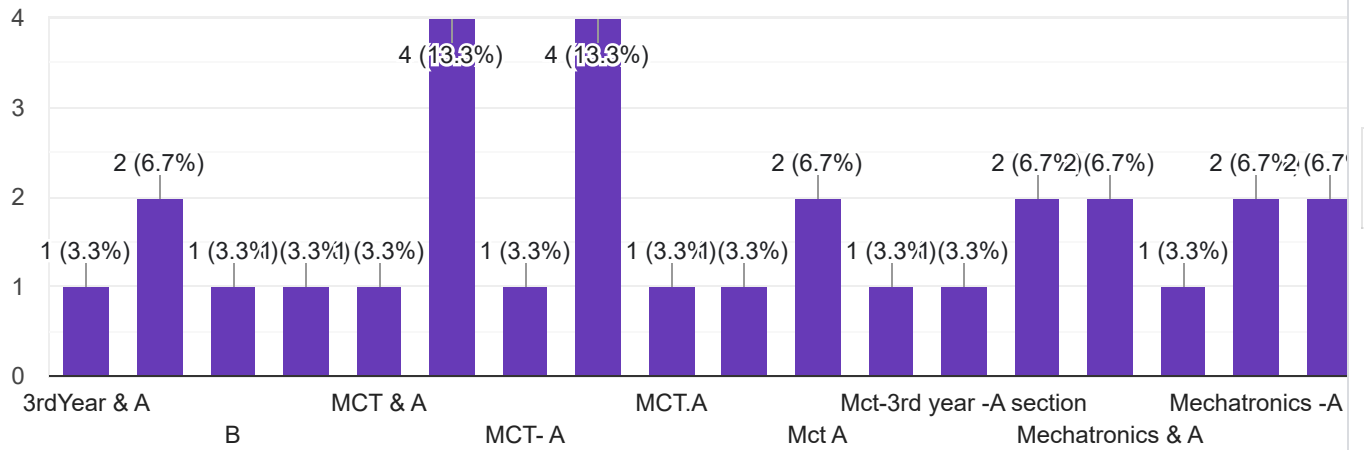
720721109037

720721109035

CLASS & SECTION

Copy chart

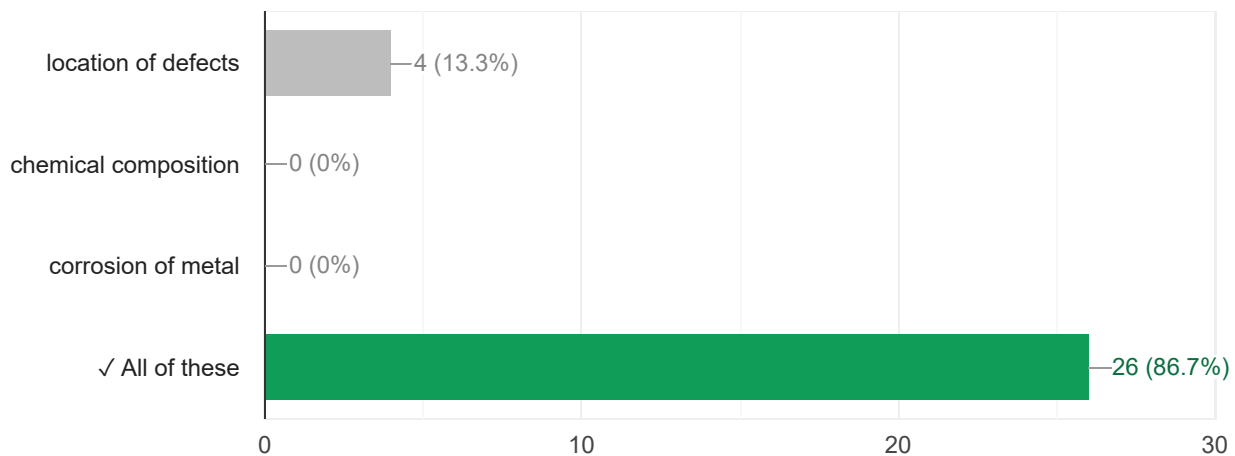
30 responses



Non-destructive testing is used to determine

Copy chart

26 / 30 correct responses



What is meant by specific surface?

Copy chart

0 / 30 correct responses



NDT QUIZ



Questions

Responses 30

Settings

Total points: 25

Ultrasonic waves are produced by using

2/30

Ultrasonic waves have property

1/30

Scores

[Release scores](#)

Email	Score/25	Score released
balasurya.102003@gmail.com	2	Not released
720721109048@hicet.ac.in	5	Not released
720721109803@hicet.ac.in	18	Not released
kishanme007@gmail.com	18	Not released
720721109828@hicet.ac.in	16	Not released
720721109031@hicet.ac.in	19	Not released
720721109819@hicet.ac.in	20	Not released
720721109009@hicet.ac.in	16	Not released

NAME OF THE STUDENT

30 responses

KARTHIKEYAN

Balasurya



21MT6304 NON DESTRUCTIVE TESTING TECHNIQUES

B *I* U

Batch 2021-2025

Academic Year : 2023-2024 EVEN SEM

This form is automatically collecting emails from all respondents. [Change settings](#)

NAME OF THE STUDENT *

Short-answer text

REGISTER NUMBER *

Short-answer text

CLASS & SECTION *

Short-answer text

Non-destructive testing is used to determine *

- location of defects
- chemical composition
- corrosion of metal
- All of these

What is meant by specific surface? *

- surface area per unit volume
- surface area per unit weight
- surface weight per unit area
- none of the above

Which type of microscope is used to determine particle diameter between (10 to 0.001 μ)? *





QUIZ 1 NTMT



Questions

Responses 32

Settings

Total points: 30

720721109060@hicet.ac.in

26

4 Sept 15:20

720721109056@hicet.ac.in

26

4 Sept 15:20

720721109049@hicet.ac.in

28

4 Sept 15:20

Name of the student

32 responses

Venkadeshanejyasankar2003@gmail.com

Mohit K

Gayatri G

Jeevan P Hariharan

H MOHAMMED ADNAN

Yuvansri S

VINESH KARTHI.A

Balasurya

ABDUL BASITH


RAGESH A

Sakthivel

Kishan k nair

Aswin krishna

Ranjan S


QUIZ 1 NTMT (Responses) ☆ 📁 ☁️
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	A	B	C	D	E	F	G
1	Timestamp	Email address	Score	Name of the student	Register number (EX.720	CLASS : (year & sec)	Official Email ID (reg.no.)
2	04/09/2023 14:27:56	720721109095@hiket.ac	24 / 30	Viswa Raja S	720721109095	Mechatronics 3rd Year "	720721109095@hiket.ac
3	04/09/2023 14:29:55	720721109091@hiket.ac	24 / 30	Vignesh kumar V	720721109091	MCT B 3rd year	720721109091@hiket.ac
4	04/09/2023 14:36:36	720721109071@hiket.ac	27 / 30	SANJAIRAJ	720721109071	3rd mechatronics -b	720721109071@hiket.ac
5	04/09/2023 14:38:34	720721109069@hiket.ac	29 / 30	SABTHA SRIRAM.K	720721109069	MECHATRONICS B 3rd	727721109069@hiket.ac
6	04/09/2023 14:38:37	720721109075@hiket.ac	24 / 30	Sathiyarayanan D	720721109075	III year , mechatronics B	720721109075@hiket.ac
7	04/09/2023 14:40:34	720721109060@hiket.ac	27 / 30	Nisamudheen tp	720721109060	3rd year, section b	720721109060@hiket.ac
8	04/09/2023 14:41:12	720721109056@hiket.ac	27 / 30	Mishal shamsudheen	720721109056	3 year B Section	720721109056@hiket.ac
9	04/09/2023 14:41:56	720721109049@hiket.ac	29 / 30	M. M. Mohamed rafiq	720721109049	Mct-B Ill-year	720721109049@hiket.ac
10	04/09/2023 14:42:01	720721109039@hiket.ac	27 / 30	D KATHIRAVAN	720721109039	Thirdyear Mechatronics /	720721109039@hiket.ac
11	04/09/2023 14:42:02	720721109006@hiket.ac	30 / 30	Amizhdhayazh M	720721109006	3- a	720721109006@hiket.ac
12	04/09/2023 14:42:02	saravansaranvishnu00	23 / 30	SARAVANAN S	720721109073	III YEAR - B	720721109073@hiket.ac
13	04/09/2023 14:42:09	720721109806@hiket.ac	29 / 30	DEEPAK P	720721109806	MCT-B, 3YEAR	720721109806@hiket.ac
14	04/09/2023 14:42:10	720721109810@hiket.ac	30 / 30	Gayatri G	720721109810	3year & 'A'sec	720721109810@hiket.ac
15	04/09/2023 14:42:22	720721109807@hiket.ac	29 / 30	DINESH B	720721109807	3rd mct B	720721109807@hiket.ac
16	04/09/2023 14:42:23	720721109002@hiket.ac	29 / 30	ABDUL BASITH	720721109002	3&A	720721109002@hiket.ac
17	04/09/2023 14:43:06	720721109040@hiket.ac	30 / 30	KAVIARUN	720721109040	3 A	720721109040@hiket.ac
18	04/09/2023 14:43:16	ranjan.sakthi29@gmail.c	22 / 30	Ranjan S	720721109067	3 & B	720721109067@hiket.ac
19	04/09/2023 14:43:24	720721109828@hiket.ac	30 / 30	VINESH KARTHI.A	720721109828	3 MCT A	720721109828@hiket.ac
20	04/09/2023 14:43:29	720721109023@hiket.ac	28 / 30	Dinesh kumar.k	720721109023	3 year &A	720721109023@hiket.ac
21	04/09/2023 14:43:34	720721109019@hiket.ac	24 / 30	Balasurya	720721109019	III A	720721109019@hiket.ac
22	04/09/2023 14:43:59	720721109821@hiket.ac	28 / 30	RAGESH A	720721109821	III Year B section	720721109821@gmail.co
23	04/09/2023 14:44:29	720721109830@hiket.ac	30 / 30	Yuvansri S	720721109830	3rd - B	720721109830@hiket.ac
24	04/09/2023 14:45:33	720721109051@hiket.ac	29 / 30	Mohammed Ansil CP	720721109051	MCT B , 3 yr	720721109051@hiket.ac
25	04/09/2023 14:45:54	720721109804@hiket.ac	30 / 30	Aswin. T	720721109804	3rd year- B sec	720721109804@hiket.ac
26	04/09/2023 14:46:45	720721109050@hiket.ac	23 / 30	H MOHAMMED ADNAN	720721109050	Mct-B 3rd year	720721109050@hiket.ac
27	04/09/2023 14:49:20	720721109070@hiket.ac	29 / 30	Sakthivel	720721109070	III YEAR & MCT-B	720721109070@hiket.ac

+ ☰  Form responses 1 ▾