



Remedial Classes 2020-21 Phase -I

Department of Mechanical Engineering

GOKARAJU RANGARAJU
INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Autonomous)

Table of Contents

| S.No | Details |
|-------------|---------------------------|
| 1 | Circular |
| 2 | Schedule of Classes |
| 3 | Student Roll List |
| 4 | Student Attendance Sheets |
| 5 | Faculty Report |
| 6 | Student Feedback |
| 7 | Photographs |
| 8 | Transition Rate Report |



GRIET/PRIN/12A/G/20-21

30th May 2021

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

REMEDIAL CLASSES 202-21

CIRCULAR

FINISHING SCHOOL

This is to inform you all that Remedial Classes will be held for academically weak students from May to June 2021. List of students and time tables are send to individual departments.

A handwritten signature in blue ink, appearing to read 'V N Ramakrishna'.

Dean Finishing School

-

30th May 2021

From
Dean,
Finishing school
GRIET.

To
The HOD
MECH
GRIET

Request for faculty and Class rooms to conduct Remedial classes.

Sir/Madam,

This is to inform you that Finishing school of GRIET is conducting Remedial classes for B.Tech II year & III year students to clear their backlogs of Sem-I.

To conduct the classes we request you

- 1) Permit us to use 2 online classes from 3PM -4PM from 31st May 2021 to 16th June 2021
- 2) Nominate faculty to teach the following courses:

| S.No | YEAR | Course title | No. of Students | Name of the faculty |
|------|-------|------------------------------------|-----------------|---------------------|
| 1 | II-II | FLUID MECHANICS AND FLUID MACHINES | 24 | Mr. B Ch Nookaraju |
| 2 | III-I | DYNAMICS OF MACHINERY | 16 | Ms Bandhavi |



Thanking you
Yours Sincerely,
Dr V N Ramadevi



Gokaraju Rangaraju Institute of Engineering and Technology

Electrical and Electronics Engineering

Finishing School

Remedial Classes Schedule (ONLINE)

31st May 2021 to 19th May 2021

II-II/III-I B.Tech

| S.No | Subject | Year | Name of the Faculty | Session-1 | Session-2 | Session-3 | Session-4 | Session-5 |
|------|------------------------------------|-------|---------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| 1 | FLUID MECHANICS AND FLUID MACHINES | II-II | Mr. B Ch Nookaraju | 31/05/2021 (3.00 to 4.00) | 5/06/2021 (3.00 to 4.00) | 07/06/2021 (3.00 to 4.00) | 12/06/2021 (3.00 to 4.00) | 14/06/2021 (3.00 to 4.00) |
| 2 | DYNAMICS OF MACHINERY | III-I | Ms Ch Bandhavi | 01/06/2021 (3.00 to 4.00) | 04/06/2021 (3.00 to 4.00) | 08/06/2021 (3.00 to 4.00) | 11/06/2021 (3.00 to 4.00) | 15/06/2021 (3.00 to 4.00) |

HOD-MECH

Dean, Finishing School

(Faculty Coordinator)

Gokaraju Rangaraju Institute of Engineering and Technology



Mechanical Engineering

Remedial Classes-

List of students

FLUID MECHANICS AND FLUID MACHINES (II-II)

| Sl.No | Roll.No | Subject Code | Subject Name |
|--------------|----------------|---------------------|---|
| 1 | 18241A0363 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 2 | 18241A0321 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 3 | 18241A0306 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 4 | 18241A0330 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 5 | 18241A0374 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 6 | 18241A0302 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 7 | 18241A0380 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 8 | 18241A0382 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 9 | 18241A0317 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 10 | 17241A0325 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 11 | 17241A0376 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 12 | 17241A0309 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 13 | 17241A0359 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 14 | 17241A0373 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 15 | 17241A03B2 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 16 | 17241A0391 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 17 | 17241A0342 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 18 | 17241A0323 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 19 | 16241A03A8 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 20 | 17241A0346 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 21 | 17241A0327 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 22 | 17241A0308 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 23 | 17241A0319 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |
| 24 | 18245A0307 | GR18A2025 | FLUID MECHANICS AND FLUID MACHINES |



GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

SYLLABUS

SUBJECT:

FLUID MECHANICS AND FLUID MACHINES

CourseCode:GR18A2045

L/T/P/C: 3/0/0/3 II Year II Semester

Unit I Definition of fluid, Newton's law of viscosity, Units and dimensions- Properties of fluids, mass density, specific volume, specific gravity, viscosity, compressibility and surface tension, Control volume- application of continuity equation and momentum equation, Incompressible flow, Bernoulli's equation and its applications.

Unit II Exact flow solutions in channels and ducts, Couette and Poiseuille flow, laminar flow through circular conduits and circular annuli-concept of boundary layer- measures of boundary layer thickness-Darcy Weisbach equation, friction factor, Moody's diagram.

Unit III Need for dimensional analysis-methods of dimension analysis-Similitude-types of similitude Dimensionless parameters-application of dimensionless parameters-Model analysis.

Unit IV Euler's equation-theory of roto dynamic machines-various efficiencies-velocity components at entry and exit of the rotor, velocity triangles-Centrifugal pumps, working principle, work done by the impeller, performance curves-Cavitation in pumps-Reciprocating pump-working principle.

Unit V Classification of water turbines, heads and efficiencies, velocity triangles-Axial, radial and mixed flow turbines- Pelton wheel, Francis turbine and Kaplan turbines, working principles- draft tube-Specific speed, unit quantities, performance curves for turbines-governing of turbines.

Text/Reference Books: 1. Hydraulics, fluid mechanics and Hydraulic machinery MODI and SETH. 2. Fluid Mechanics and Hydraulic Machines by R K Rajput. 3. Fluid Mechanics and Hydraulic machines by R K Bansal, Laxmi publications. 4. Fluid Mechanics & Hydraulic Machines: Problems & Solutions by K.Subrmanya /TMH private limited. 5. Hydraulic Machines by Banga& Sharma, Khanna Publishers.

Faculty Report on Subject (Topics covered)

Subject: Fluid mechanics and Fluid Machines

Unit I

- Discussed Application of continuity equation
- momentum equation, Incompressible flow,
- Bernoulli's equation and its applications.

Unit II

- Explained Couette and Poiseuille flow,
- laminar flow through circular conduits and
- circular annuli-concept of boundary layer–

Unit III

- Discussed Need for dimensional analysis–methods of dimension analysis–
Similitude–
- types of similitude Dimensionless parameters–
- application of dimensionless parameters–Model analysis.

Unit IV

- Explained Euler's equation–theory of roto dynamic machines–
- various efficiencies–velocity components at entry and exit of the rotor,
- velocity triangles–Centrifugal pumps,

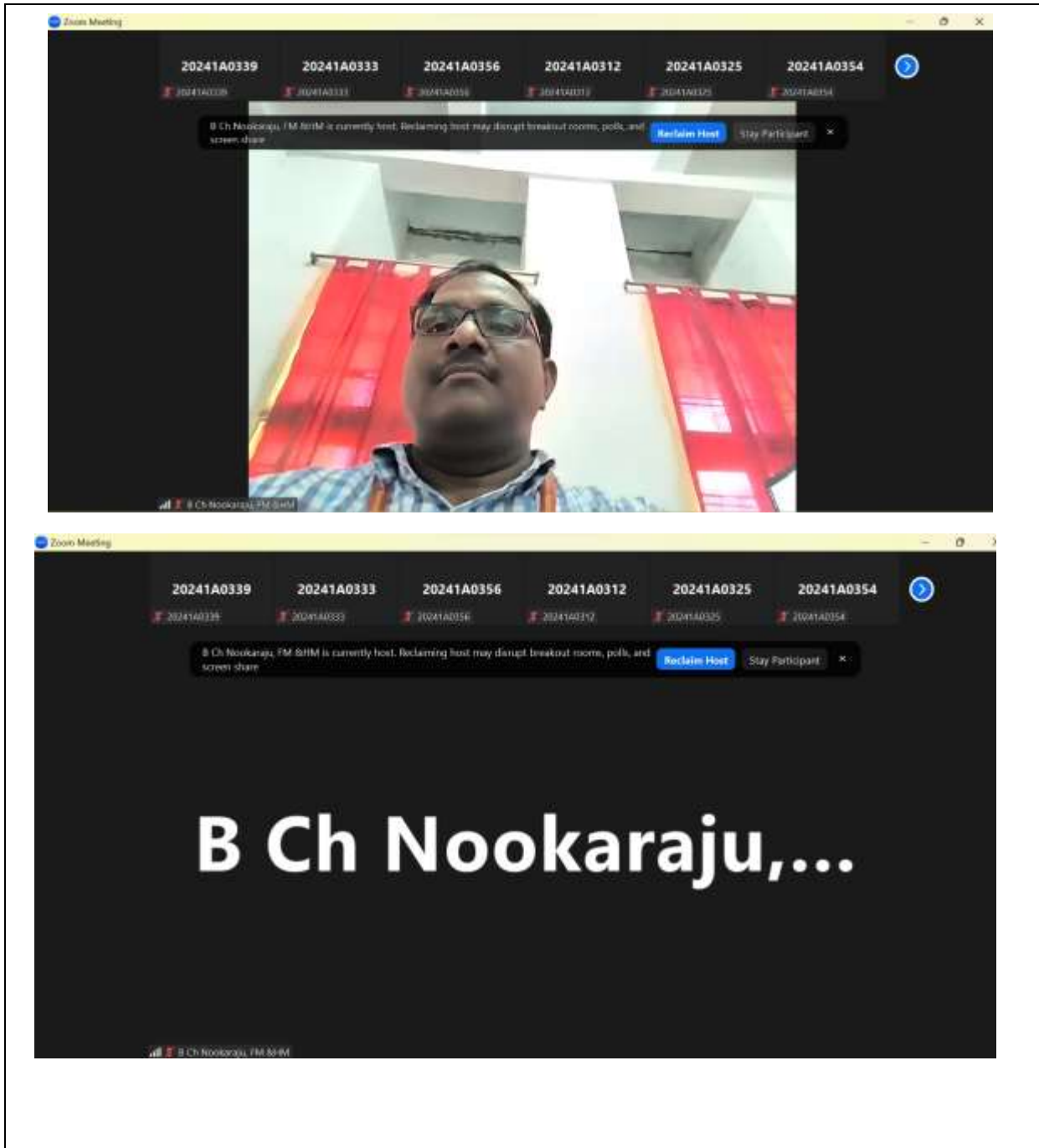
Unit V

- Discussed Classification of water turbines,
- heads and efficiencies, velocity triangles-Axial,
- radial and mixed flow turbines- Pelton wheel,

IMAGES OF CLASSES TAKEN

ONLINE MODE

FLUID MECHANICS AND FLUID MACHINES



ATTENDENCE CUM RESULT TABLE



Gokaraju Rangaraju Institute of Engineering & Technology

Autonomous

**Subject: Fluid
Mechanics and Fluid
Machines**

I B.Tech:2020-2021

| S.NO | Roll.NO | 31-05-2023 | 05-06-2023 | 07-06-2023 | 12-06-2023 | 14-06-2023 | Result |
|------|------------|------------|------------|------------|------------|------------|--------|
| 1 | 18241A0363 | P | A | A | P | P | Pass |
| 2 | 18241A0321 | A | P | P | P | P | Pass |
| 3 | 18241A0306 | P | P | A | P | P | Pass |
| 4 | 18241A0330 | P | A | A | A | P | Failed |
| 5 | 18241A0374 | P | P | A | P | P | Pass |
| 6 | 18241A0302 | A | A | P | P | P | Pass |
| 7 | 18241A0380 | P | P | P | P | P | Pass |
| 8 | 18241A0382 | P | P | P | P | P | Pass |
| 9 | 18241A0317 | A | P | P | P | P | Pass |
| 10 | 17241A0325 | P | A | A | A | P | Failed |
| 11 | 17241A0376 | P | P | P | P | P | Pass |
| 12 | 17241A0309 | A | P | P | P | P | Pass |
| 13 | 17241A0359 | P | P | P | P | P | Pass |
| 14 | 17241A0373 | A | A | A | A | A | Failed |
| 15 | 17241A03B2 | P | P | P | P | P | Pass |
| 16 | 17241A0391 | P | P | A | A | P | Pass |
| 17 | 17241A0342 | P | P | P | P | P | Pass |
| 18 | 17241A0323 | A | P | P | P | P | Pass |
| 19 | 16241A03A8 | A | A | A | P | A | Failed |
| 20 | 17241A0346 | P | P | P | P | P | Pass |
| 21 | 17241A0327 | P | A | P | P | P | Pass |
| 22 | 17241A0308 | P | P | P | P | P | Pass |
| 23 | 17241A0319 | P | P | P | P | P | Pass |
| 24 | 18245A0307 | A | P | P | A | P | Pass |



GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

**FINISHING
SCHOOL**

REMEDIAL CLASSES (Academic support for students) Student Feed Back

Branch: MECH Year: II Sem: II

Subject: Fluid mechanics and fluid machines

Faculty Name: Mr B Ch Nookaraju

| S.No | Item | Feedback |
|------|------------------------------|--|
| 1 | Material presented | ✓ Excellent/Very Good/Good/Average/Below Average |
| 2 | Teaching Clarity | ✓ Excellent/Very Good/Good/Average/Below Average |
| 3 | Covering of important topics | Excellent/✓Very Good/Good/Average/Below Average |
| 4 | Doubts clarification | Excellent/✓Very Good/Good/Average/Below Average |

Suggestions:

Dean Finishing School

Gokaraju Rangaraju Institute of Engineering and Technology

Mechanical Engineering

Remedial Classes-

List of students



DYNAMICS OF MACHINERY (DOM)

| Sl.No | Roll.No | Subject Code | Subject Name |
|--------------|----------------|---------------------|-----------------------|
| 1 | 18241A03B0 | GR18A2052 | DYNAMICS OF MACHINERY |
| 2 | 18241A0344 | GR18A2052 | DYNAMICS OF MACHINERY |
| 3 | 18241A03A5 | GR18A2052 | DYNAMICS OF MACHINERY |
| 4 | 18241A0302 | GR18A2052 | DYNAMICS OF MACHINERY |
| 5 | 18241A0382 | GR18A2052 | DYNAMICS OF MACHINERY |
| 6 | 18241A0385 | GR18A2052 | DYNAMICS OF MACHINERY |
| 7 | 14241A03C6 | GR18A2052 | DYNAMICS OF MACHINERY |
| 8 | 18241A0317 | GR18A2052 | DYNAMICS OF MACHINERY |
| 9 | 18241A0316 | GR18A2052 | DYNAMICS OF MACHINERY |
| 10 | 18241A0380 | GR18A2052 | DYNAMICS OF MACHINERY |
| 11 | 17241A0309 | GR18A2052 | DYNAMICS OF MACHINERY |
| 12 | 17241A0342 | GR18A2052 | DYNAMICS OF MACHINERY |
| 13 | 17241A0373 | GR18A2052 | DYNAMICS OF MACHINERY |
| 14 | 17241A0391 | GR18A2052 | DYNAMICS OF MACHINERY |
| 15 | 16241A0360 | GR18A2052 | DYNAMICS OF MACHINERY |
| 16 | 15241A0328 | GR18A2052 | DYNAMICS OF MACHINERY |

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

SYLLABUS SUBJECT-2 (DYNAMICS OF MACHINERY)

DYNAMICS OF MACHINERY

Course Code: GR18A3024 L/T/P/C: 3/0/0/3

III Year I Semester

UNIT I: Gyroscopes: Introduction, Precisional angular motion, Gyroscopic couple, effect of gyroscopic couple on an aeroplane, effect of gyroscopic couple on a naval ship during steering, gyroscopic couple on a naval ship during pitching, Gyroscopic couple on a naval ship during rolling, stability of a four wheel drive moving in a curved path, stability of a two wheel vehicle taking a turn.

UNIT II: Static Force Analysis: Introduction, Static Equilibrium, Equilibrium of Two-force and Three force members, Member with Two force Dynamic force Analysis: Introduction, D'Alemberts principle, Equivalent Offset inertia force, Dynamic analysis of Four bar and Single slider mechanisms, Piston effort, Turning moment on crank shaft, Inertia of connecting rod, Inertia forces in reciprocating Engines.

UNIT III: Governors: Introduction, types of governors, Watt governor, Porter governor, Proell governor, Hartnell governor, Wilson-Hartnell governor, Spring controlled gravity governor, Inertia governors, Sensitiveness of governor, Hunting, Isochronism, Stability, effort of governor, Power of governor, Controlling force. Brakes and Dynamometers: Types of brakes: Simple block brake, band and block brake internal expanding shoe brake-effect of braking of a vehicle. Dynamometers – absorption and transmission types. General description and methods of operation.

UNIT IV: Balancing of Rotating Masses: Balancing of rotating masses in single and different planes. Balancing of Reciprocating Masses: Primary, Secondary, and higher balancing of reciprocating masses, Analytical and graphical methods. Unbalanced forces and couples – examination of “V” multi cylinder in line and radial engines for primary and secondary balancing, locomotive balancing–Hammer blow, Swaying couple, variation of tractive efforts.

UNIT V: Vibrations: Free Vibration of mass attached to vertical spring – Transverse loads – vibrations of beams with concentrated and distributed loads. Dunkerly's method – Raleigh's method. Whirling of shafts – critical speed – torsional vibrations – one, two and three rotor systems.

TEXT BOOKS 1. Theory of Machines / S.S Ratan/ Mc. GrawHill Publ. 2. Theory of machines/Khurmi/S.Chand. REFERENCES 1. Theory of Machines by Thomas Bevan/ CBS 2. Theory of Machines / R.K Bansal 3. Theory of Machines Sadhu Singh Pearson's Edition 4. Theory of Machines /Shigley/ Oxford. 5. Theory of machines – PL. Balaney/khanna publishers. 6. Mechanism and Machine Theory / JS Rao and RV Dukkipati / New Age Teaching Methodology: Power point Presentations, Working models, white board & marker

Faculty Report on Subject (Topics covered)

Dynamics of Machinery

UNIT I: discussed Gyroscopes: Introduction, Precisional angular motion, Gyroscopic couple, effect of gyroscopic couple on an aeroplane, effect of gyroscopic couple on a naval ship during steering,

UNIT II: explained Static Force Analysis: Introduction, Static Equilibrium, Equilibrium of Two-force and Three force members,

UNIT III: discussed Governors: Introduction, types of governors, Watt governor, Porter governor, Proell governor, Hartnell governor,

UNIT IV: solved more problems on Balancing of Rotating Masses: Balancing of rotating masses in single and different planes.

UNIT V: Vibrations: Solved problems on Free Vibration of mass attached to vertical spring – Transverse loads – vibrations of beams with concentrated and distributed loads.



Gokaraju Rangaraju Institute of Engineering & Technology

ATTENDENCE cum RESULT table

I B.Tech:2020-2021

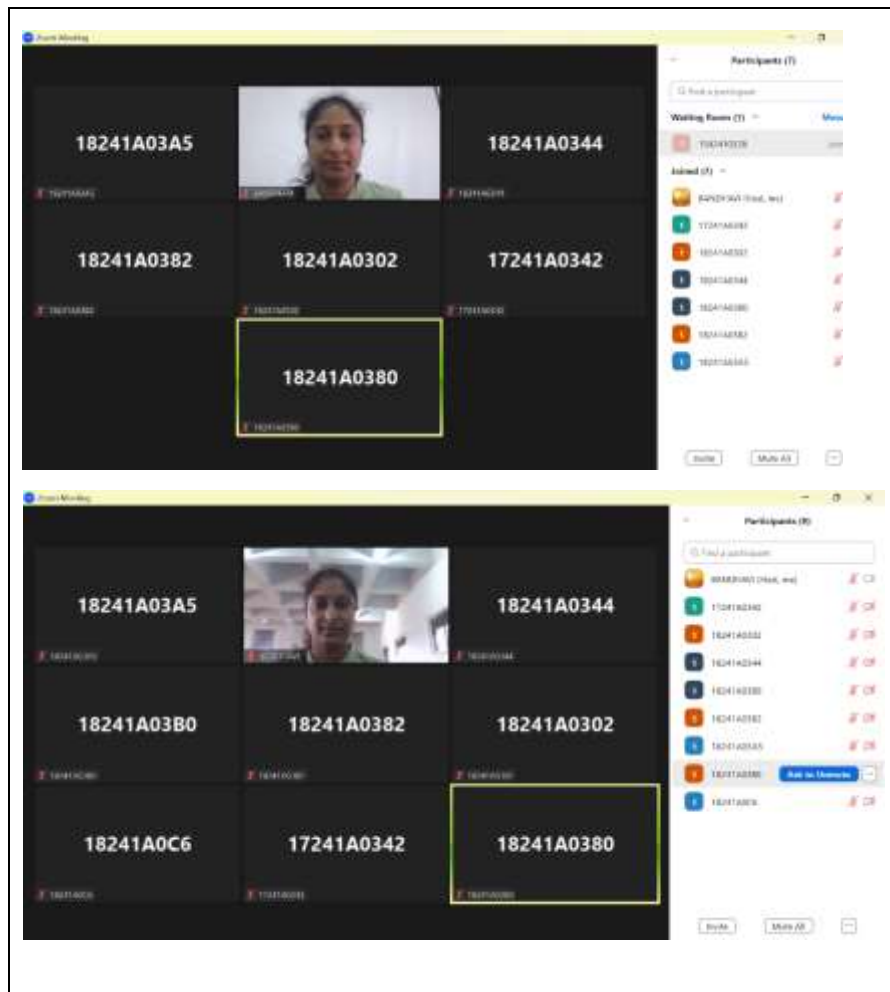
Autonomous

Subject: DOM

| S.NO | Roll.NO | 01-06-2023 | 04-06-2023 | 08-06-2023 | 11-06-2023 | 15-06-2023 | Result |
|-------------|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------|
| 1 | 18241A03B0 | P | P | P | P | P | Pass |
| 2 | 18241A0344 | P | P | P | P | P | Pass |
| 3 | 18241A03A5 | P | A | A | A | P | Failed |
| 4 | 18241A0302 | A | P | P | P | P | Pass |
| 5 | 18241A0382 | P | A | P | A | P | Pass |
| 6 | 18241A0385 | A | P | P | P | P | Pass |
| 7 | 14241A03C6 | P | P | A | P | P | Pass |
| 8 | 18241A0317 | P | P | P | A | P | Pass |
| 9 | 18241A0316 | A | P | P | P | P | Pass |
| 10 | 18241A0380 | P | P | P | P | P | Pass |
| 11 | 17241A0309 | A | P | P | P | P | Pass |
| 12 | 17241A0342 | P | P | A | A | A | Failed |
| 13 | 17241A0373 | P | P | P | P | P | Pass |
| 14 | 17241A0391 | P | P | A | P | P | Pass |
| 15 | 16241A0360 | A | A | A | P | P | Failed |
| 16 | 15241A0328 | A | A | P | P | P | Pass |

IMAGES OF CLASSES TAKEN

ONLINE MODE Dynamics of Machinery





GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

**FINISHING
SCHOOL**

REMEDIAL CLASSES (Academic support for students) Student Feed Back

Branch: MECH

Year: III Sem: I

Subject: Dynamics of Machinery

Faculty Name: Mrs. Ch Bandhavi

| S.No | Item | Feedback |
|------|------------------------------|--|
| 1 | Material presented | ✓ Excellent/Very Good/Good/Average/Below Average |
| 2 | Teaching Clarity | ✓ Excellent/Very Good/Good/Average/Below Average |
| 3 | Covering of important topics | Excellent/✓ Very Good/Good/Average/Below Average |
| 4 | Doubts clarification | Excellent/✓ Very Good/Good/Average/Below Average |

Suggestions:

V N Ramadani

Dean Finishing School

Report on Remedial Classes

This is to inform you that Finishing school of GRIET is conducting Remedial classes for B.Tech II year, III year, and IV year students to clear their backlogs.

Details are

1. Remedial classes are conducted in different Subjects to support the Students in clearing their backlogs. As the first step, classes are held for Final year and Marched out batches in three different schedules. Students were informed through SMS. Students shown lot of interest .Faculty gave tips as well as material for the students.80-90% of the students who have attended got benefit and they passed in the exams.
2. The classes are aimed to help the students having a maximum of threebacklogs so that they will get the degree as per their academic calendar. Students preferred material and few tips as they were busy in Projects. For some subjects they came and attentive.
3. The sessions for II & III-year students are to prevent failure rate and thereby increasing transition rate. The subjects are selected based on I-semester results. To increase attendance for the classes a brief motivation lecture is organized with the key note address by HOD.

The following shows the courses for which Remedial classes are held and the Transition rate in such course:

| S.No | Course | No.of students attended | No.of students passed | Transition rate |
|------|------------------------------------|-------------------------|-----------------------|-----------------|
| 1. | Fluid Mechanics and fluid machines | 24 | 20 | 83.3% |
| 2. | Dynamics of Machinery | 16 | 13 | 81.1% |