REMEDIAL CLASSES

2023-24

GOKARAJU RANGARAJU
INSTITUTE OF ENGINEERING AND TECHNOLOGY
(Autonomous)

Table of Contents

GRIET/PRIN/15B/G /23-24

28th Dec 2023

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

REMEDIAL CLASSES 2023-24

CIRCULAR

FINISHING SCHOOL

This is to inform you all that Remedial Classes will be held for academically weak students during Feb 2024. List of students and time tables are sent to individual departments.

Dean Finishing School

28th Dec 2023

From
Dean,
Finishing school
GRIET.

To
The HOD
Civil Engineering Dept
GRIET

Sub: Request for faculty Allocation to conduct Remedial classes.

Sir/Madam,

This is to inform you that Finishing school of GRIET is conducting Remedial classes to selective students of B. Tech II year, who are slow learners. This would help in improving their performance credits. To conduct the classes in offline mode, we request you to Nominate faculty to teach the following courses:

S.No	Year	Course title	No. of Students	Name of the faculty	Signature of the faculty
1	II	(GR20A2018) Structural Analysis-I (SA1)	41	Mrs. K Hemalata	
2		(GR20A2019) Hydraulics Engineering (HE)	48	Dr. Mohammad Hussain	

Thanking you

Yours Sincerely,
Dr. J. Sridevi

Gokaraju Rangaraju Institute of Engineering and Technology

Finishing School

Remedial Classes Schedule

January - 2024

B.Tech II Year

Timing: SA-1: 3.00-4.00pm
HE: 3.00-4.00pm
Room No: 4204

S.No	Subject	Name of the Faculty	Session-1	Session-2	Session-3	Session-4
1	(GR20A2018) Structural Analysis-I (SA-1)	Ms. K Hemalata	**04/01/2024 (3.00 – 4.00pm)**	**05/01/2024 (3.00 – 4.00pm)**	**08/01/2024 (3.00 – 4.00pm)**	**09/01/2024 (3.00 – 4.00pm)**
2	(GR20A2019) Hydraulics Engineering (HE)	Dr. Mohammad Hussain	**06/01/2024 (3.00 – 4.00pm)**	**07/01/2024 (3.00 – 4.00pm)**	**10/01/2024 (3.00 – 4.00pm)**	**11/01/2024 (3.00 – 4.00pm)**

Dean, Finishing School

GRIET/PRIN/15B/G /23-24

28th Dec 2023

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

REMEDIAL CLASSES 2023-24

STUDENT ROLL LIST

Roll No	Subject Code	Subject
21241A0101	GR20A2019	Hydraulics Engineering (HE)
21241A0102		
21241A0104		
21241A0108		
21241A0110		
21241A0113		
21241A0115		
21241A0117		
21241A0118		
21241A0119		
21241A0120		
21241A0123		
21241A0124		
21241A0125		
21241A0129		
21241A0133		
21241A0134		
21241A0135		
21241A0136		
21241A0139		
21241A0140		
21241A0141		
21241A0142		
21241A0143		
21241A0144		
21241A0147		
21241A0148		
21241A0151		
22245A0101		
22245A0112		
22245A0113		
22245A0114		
20241A0101		

20241A0103 20241A0105 20241A0106 20241A0107 20241A0108 20241A0110 20241A0113 20241A0114 20241A0126 20241A0130 20241A0135 20241A0141 20241A0147 20241A0148 20241A0151		
21241A0101 21241A0110 21241A0113 21241A0115 21241A0118 21241A0119 21241A0120 21241A0123 21241A0124 21241A0125 21241A0133 21241A0134 21241A0136 21241A0139 21241A0140 21241A0141 21241A0142 21241A0144 21241A0147 21241A0148 22245A0101 22245A0113 22245A0114 20241A0103 20241A0105 20241A0106 20241A0107 20241A0108	GR20A2018	Structural Analysis-1 (SA-1)

20241A0109 20241A0110 20241A0113 20241A0114 20241A0126 20241A0130 20241A0135 20241A0138 20241A0139 20241A0141 20241A0148 20241A0151 20241A0156		

Dean, Finishing School

REMEDIAL CLASSES 2023-24

ATTENDENCE SHEET

Hydraulics Engineering (HE)

Roll No	6th Jan 2024	7th Jan 2024	10th Jan 2024	11th Jan 2024	Status Pass/Fail
21241A0101					Fail
21241A0102	p	p	p	p	Pass
21241A0104	p	p	p	p	Pass
21241A0108					Fail
21241A0110					Fail
21241A0113					Fail
21241A0115	P				Fail
21241A0117					Fail
21241A0118		P	P		Fail
21241A0119					Fail
21241A0120					Fail
21241A0123		P	P		Fail
21241A0124					Fail
21241A0125					Fail
21241A0129	p	p	p	p	Pass
21241A0133					Fail
21241A0134					Fail
21241A0135	p	p	p	p	Pass
21241A0136					Fail
21241A0139					Fail
21241A0140					Fail
21241A0141					Fail
21241A0142					Fail
21241A0143	p	p	p	p	Pass
21241A0144					Fail
21241A0147					Fail
21241A0148					Fail
21241A0151					Fail

22245A0101					Fail
22245A0112					Fail
22245A0113					Fail
22245A0114					Fail
20241A0101	p	p	p	p	Pass
20241A0103					Fail
20241A0105					Fail
20241A0106					Fail
20241A0107					Fail
20241A0108	P	P			Fail
20241A0110					Fail
20241A0113					Fail
20241A0114					Fail
20241A0126					Fail
20241A0130	P	P	P		Fail
20241A0135					Fail
20241A0141					Fail
20241A0147					Fail
20241A0148					Fail
20241A0151					Fail

Faculty

REMEDIAL CLASSES 2023-24

ATTENDENCE SHEET

Structural Analysis-1 (SA-1)

Roll No	4th Jan 2024	5th Jan 2024	8th Jan 2024	9th Jan 2024	Status Pass/Fail
21241A0101	p	p			Fail
21241A0110					Fail
21241A0113					Fail
21241A0115					Fail
21241A0118					Fail
21241A0119					Fail
21241A0120	p	p	p	p	Pass
21241A0123					Fail
21241A0124					Fail
21241A0125					Fail
21241A0133					Fail
21241A0134	p	p		p	Fail
21241A0136					Fail
21241A0139					Fail
21241A0140					Fail
21241A0141					Fail
21241A0142	p	p	p	p	Pass
21241A0144	p	p	p	p	Pass
21241A0147					Fail
21241A0148					Fail
22245A0101	p	p	p	p	Pass
22245A0113	p	p	p	p	Pass
22245A0114	p	p	p	p	Pass
20241A0103					Fail
20241A0105					Fail
20241A0106					Fail
20241A0107					Fail
20241A0108					Fail

20241A0109	p	p	p	p	Pass
20241A0110					Fail
20241A0113	p	p	p	p	Pass
20241A0114					Fail
20241A0126					Fail
20241A0130					Fail
20241A0135					Fail
20241A0138	p	p	p	p	Pass
20241A0139					Fail
20241A0141	p		p		Fail
20241A0148					Fail
20241A0151	p	p	p	p	Pass
20241A0156					Fail

Faculty

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

REMEDIAL CLASSES 2023-24

Report on Remedial Classes

Remedial classes for B.Tech II year students were conducted by finishing school of GRIET in order to help them to clear their backlogs pertaining to I semester.

Summary 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 in three different schedules. Students were informed through classroom announcements, SMS. Faculty gave required guidance on key topics of the subject and shared material/notes for the benefit of the students.
2. The classes are aimed to help the students having a maximum of three backlogs so that they will get the degree as per their academic calendar. The sessions for the students are conducted to prevent failure rate and thereby increasing transition rate.
3. The subjects are selected based on the potential backlogs of the students. To increase attendance for the classes a brief motivation lecture was organized with the key note address by HOD.

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

S.No	Course	No. of students	No. of students passed	Transition rate %
1.	Structural Analysis -I (SA-I) (GR20A2011)	41	10	24
2.	Hydraulic Engineering (HE) (GR20A2013)	48	6	13

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

REMEDIAL CLASSES 2023-24

Faculty Report on Subject

STRUCTURAL ANALYSIS-I

UNIT 1. Explained the concepts of strain energy in linear elastic system, expression of strain energy due to axial load, bending moment and shear forces – Castiglione's first theorem – Deflections of simple beams and pin jointed trusses (Use Unit load method)

UNIT 2. Explained the Classification of arches, advantage of arch, three and two hinged arches– Circular and parabolic arches yielding of supports, Effect of rib shortening, Effect of temperature changes, Tied and linear arch, Eddy's theorem

Unit 3. Explained the a. Propped cantilevers b. Fixed beams c. Continuous Beams (By Clapeyron's theorem of three moments)

UNIT 4. Explained the Analysis of Simple and Continuous Beams (Indeterminate Structures) (up to 2nd degree of Static in-determinacy) a. Slope Deflection method b. Moment Distribution method c. Kani's Method.

UNIT 5 Discussed the Moving Loads and Influence Line Diagrams: Introduction, maximum SF and BM at a given section and absolute maximum S.F and B.M due to single concentrated load, U.D load longer than the span, U.D load shorter than the span, two point loads with fixed distance between them and several point loads Definition of influence line for SF, Influence line for B.M- load position for maximum SF at a section –Load positions for maximum BM at a section – Point loads , UDL longer than the span, UDL shorter than the span- Influence lines for forces in members of Pratt and Warren trusses.

Model papers of previous Academic years shared

I. Notes uploaded in Student Portal
II. Shared the important topics and numericals explained
III. Tutorial classes are conducted for clarifying doubts

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

REMEDIAL CLASSES 2023-24

Faculty Report on Subject

HYDRAULIC ENGINEERING

Unit I: Introduction to Open Channel Flow Computation of Uniform flow: Comparison between open channel flow and pipe flow, geometrical parameters of a channel, classification of open channels, classification of open channel flow, Velocity Distribution of channel section. Characteristics of uniform flow, Chezy's formula, Manning's formula. Factors affecting Manning's Roughness Coefficient 'n'. Most economical section of channel. **Specific energy**, Specific energy curve, critical flow, discharge curve Specific force Specific depth, and Critical depth.

Unit II: Non-Uniform Flow Channel Transitions. Measurement of Discharge and Velocity – Venturi Flume, Parshall Flume, Measurement of Velocity- Current meter, Floats, Hotwire. Gradually Varied Flow-Dynamic Equation of Gradually Varied Flow, Classification of channel bottom slopes, Classification of surface profile, Characteristics of surface profile. Computation of water surface profile. Direct Step method.

Unit III: Dimensional Analysis and Hydraulic Similitude Dimensional homogeneity, Rayleigh method, Buckingham's Pi method. Buckingham's πTheorem application of dimensional analysis and model studies to fluid flow problem Dimensionless groups. Similitude, Model studies, Types of models. Definitions of Reynolds Number, Froude Number, Mach Number, Weber Number and Euler Number. **Basics of Turbo Machinery:** Hydrodynamic force of jets on stationary and moving flat, inclined and curved vanes, jet striking centrally

Unit IV: Hydraulic Jump Theory of hydraulic jump, Elements and characteristics of hydraulic jump in a rectangular Channel, length and height of jump, location of jump, types, applications and location of hydraulic jump. Energy dissipation and other uses, surges a moving hydraulic jump. **Hydraulic Turbines-I:** Layout of a typical Hydropower installation Heads and Efficiencies classification of turbines-pelton wheel, Francis turbine, Kaplan turbine-working, working proportions, velocity diagram, work done and efficiency, draft tube theory and function efficiency. Angular momentum principle, Applications to radial flow turbines. Governing of turbines, characteristic curves.

Unit V: Centrifugal Pumps Pump installation details-classification-work done- Manometric head minimum starting speed losses and efficiencies-specific speed multistage pumps-pumps in parallel-performance of pumps characteristic curves- NPSH-Cavitations - Reciprocating pumps basics and definition. **Hydropower Engineering:** Classification of Hydropower plants Definition of terms Load factor, utilization factor, capacity factor, estimation of hydropower potential.

I. Model papers of previous Academic years shared
II. Notes shared to students
III. Given Assignments
IV. Tutorial classes are conducted for clarifying doubts

STRUCTURAL ANALYSIS-I SESSION