

(GR18A4002) PROJECT MANAGEMENT & ENTREPRENEURSHIP

IV-B.Tech – I Semester

T.Jahnavi

Assistant Professor



Department of Civil Engineering

Gokaraju Rangaraju Institute of Engineering and Technology

Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
PROJECT MANAGEMENT & ENTREPRENEURSHIP

Course File Check List

S.No.	Name of the Format	Page No.
1	Syllabus	
2	Time Table	
3	Program Educational Objectives	
4	Program Objectives	
5	Course Objectives	
6	Course Outcomes	
7	Students Roll List	
8	Guide lines to study the course books & references, course design & delivery	
9	Course Schedule	
10	Unit Plan/Course Plan	
11	Lesson Plan	
12	Evaluation Strategy	
13	Assessment in relation to COB's and CO's	
14	Tutorial Sheets	
15	Assignment Sheets	
16	Rubric for course	
17	Mappings of CO's and PO's	
18	Model question papers	
19	Mid-I and Mid-II question papers	
20	Mid-I marks	
21	Mid-II marks	
22	Sample answer scripts and Assignments	
23	Course materials like Notes, PPT's, Videos, etc.,	

GR 18Regulations (2021-2022)

GOKARAJU RANGARAJU

INSTITUTE OF ENGINEERING AND TECHNOLOGY

PROJECT MANAGEMENT & ENTREPRENEURSHIP

IV Year B.Tech. CE – I Semester

L T P C
3 0 0 3

UNIT - I

Construction project planning- Stages of project planning: Steps involved in Project Planning pre-tender planning, Scheduling, Steps involved in Scheduling, Process of development of Schedules, Gantt Chart, Milestone Chart,

UNIT - II

Construction Project Monitoring CPM and PERT Networks, basic terminology, types of precedence relationships Preparation of CPM Networks for Construction Activities, Critical Path, Float-Types of Float, computation of Float values, work break-down structure, Three-Time Estimate, PERT-Assumptions underlying PERT analysis, determining three time estimates, analysis, slack computations, calculation of probability of completion.

UNIT - III

Construction Methods basics: Types of foundations and construction methods; Basics of Formwork and Striping of Formwork; Common building construction methods conventional walls and slabs; conventional framed structure with blockwork walls; Precast concrete construction methods; Project Quality Plan (PQP), Method Statements, Inspection and Test Plans (ITPs), Quality Control Vis-à-vis Quality Assurance. Acceptance Criteria of Concrete, Core Cutting of Concrete Members. Load Test for Flexural Members

UNIT - IV

Construction Equipment basics: Conventional construction methods Vs Mechanized methods and advantages of Mechanized methods; Equipment for Excavation-Excavators, Front End Loaders and Earthmoving-Tippers, Compaction of Soils, OMC, Dozers, Motor graders, Rollers-Static and Vibratory (Tandem), Field Tests to Test Density of Soils-Core Cutting, Sand Replacement and Nuclear Density Gauge. Concrete Mix-Nominal and Design Mix. Concrete mixing – Batching Plants, transporting (Transit Mixers) and placing - Concrete Pumping and Boom Placers, Cranes, Tower Crane.

UNIT – V

Entrepreneurship:

Concept of Entrepreneurship – entrepreneurs; Types of Entrepreneurship, Importance of Entrepreneurship, Main Characteristics of Entrepreneurship, Purpose of Entrepreneurship, Nature of Entrepreneurship, 10 characteristics of Entrepreneurs, Examples of Entrepreneurship, How do you start Entrepreneurship, Benefits of Entrepreneurship, Difference between Entrepreneurship and Business, Risks of Entrepreneurship, 7 Practical Tips to Become an Entrepreneur with No Money, Social Entrepreneurship, Challenges of Social Entrepreneurship.



Gokaraju Rangaraju Institute of Engineering and Technology
(Autonomous)
Bachupally, Kukatpally, Hyderabad – 500 090, India
TIME TABLE

IV BTech (GR18) – Isemester
Sec-A &B

DAY/ HOUR	1	2	3	4	5	6
Monday				PME A(1:40-3:20)		
Tuesday						
Wednesday		PME B(11:15-1:05)		PME A (1:40-3:20)		
Thursday		PME B(11:15-1:05)				
Friday						
Saturday						



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Programme Educational Objectives

1. Graduates of the programme will be successful in technical and professional career.
2. Graduates of the programme will have proficiency in solving real time Civil Engineering projects.
3. Graduates of the programme will continue to engage in life-long learning with ethical and social responsibility.

Programme Outcomes

Graduates of the Civil Engineering programme will be able to

- a. Apply knowledge of mathematics, science and fundamentals of Civil Engineering.
- b. Analyse problem and interpret the data.
- c. Design a system component, or process to meet desired needs in Civil Engineering within realistic constraints.
- d. Identify, formulate, analyse and interpret data to solve Civil Engineering problems.
- e. Use modern engineering tools such as CAD and GIS for the Civil Engineering practice.
- f. Understand the impact of engineering solutions in a global, economic and societal context.
- g. Understand the effect of Civil Engineering solutions on environment and to demonstrate the need for sustainable development.
- h. Understanding of professional and ethical responsibility.
- i. Work effectively as an individual or in a team and to function on multi-disciplinary context.
- j. Communicate effectively with engineering community and society.
- k. Demonstrate the management principles in Civil Engineering projects.
- l. Recognize the need for and an ability to engage in life-long learning.

B.TechProgram Specific Outcomes (PSOs)

1. Recognize the need for a sustainable environment and design smart infrastructure considering the global challenges..
2. Create and develop innovative designs with new era materials through research and development



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Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

COURSE OBJECTIVES

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

On completion of this Subject/Course the student shall be able to:

S.No	Objectives
1	Understand principles of Project Planning and development of Schedules
2	Enhance the ability to Monitor the Projects through Critical Path in Networks like CPM and PERT
3	To break down sequence of Construction Activities, Learn Project Quality Planning and Identify Inspection and Testing Plans of Project Works
4	Recognize and get acquainted with various Construction Equipment and their Management; to identify different Tests for Soils and Concrete.
5	Apply the Concepts of Entrepreneurship; Understand the Social Entrepreneurship and Challenges of Social Entrepreneurship.

Signature of HOD

Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology
(Autonomous)**

Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

COURSE OUTCOMES

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

On completion of this Subject/Course the student shall be able to:

S.No	Outcomes
1	Apply Project Planning techniques and develop Project Schedules in real time conditions.
2	Identify Critical path in CPM & PERT Networks; Evaluate Floats and Slacks for Activities & Events respectively to Progress and Complete the Project in Time.
3	Recall the Method Statements of various Activities and their ITPs with the Knowledge of Project Quality Plans.
4	Identify ideal Construction Equipment required and deploy in the best possible manner for better productivity; Conducts Field Tests for Soils at specified frequency
5	Explore the Concept of Entrepreneurship & Social Entrepreneurship; Becomes an entrepreneur being familiar with Characteristics of Entrepreneurship & Entrepreneurs.

Signature of HOD

Signature of faculty

Date:

Date:



Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous)

Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

B.Tech CIVIL Engg. IV yr-I Sem- Section A/B- GR18 2021-22

S.NO	Roll Number	Student Name
1	17241A0153	Sujith Kumar Shinde
2	17241A0157	Vuppula Mithunkumar Reddy
3	18241A0101	Ajmeera Ganesh
4	18241A0102	Anabotula Sravani
5	18241A0103	Anumatla Manoj
6	18241A0104	Byna Rishitha
7	18241A0105	Bura Tharasri
8	18241A0106	Pudari Badrinath Goud
9	18241A0107	Balasani Rohith
10	18241A0108	Bandari Veeraswamy
11	18241A0109	Bandi Varun Kumar
12	18241A0110	Bashipaka Pradeep
13	18241A0111	Bathula Nikhil
14	18241A0112	Batikiri Veerendra Swamy
15	18241A0113	Bhukya Soujanya
16	18241A0114	Bhukya Varun Naik
17	18241A0115	Boddu Pavan
18	18241A0116	Byagari Rangaraju
19	18241A0117	Chada Ruchita
20	18241A0118	Chinthakuntla Thriveen
21	18241A0119	Cv Jaswanth Surya
22	18241A0120	Dosapati Nishu
23	18241A0121	G Prashanth
24	18241A0122	Gaddipati Lohitha
25	18241A0123	Gangam Rohit Reddy
26	18241A0124	Gottemukkala Govardhan
27	18241A0125	Hrishikesh Bansal
28	18241A0126	Janapati Raju
29	18241A0127	Jyothika Mannava
30	18241A0128	K Harshitha Reddy
31	18241A0129	Kolan Reshikesh Reddy
32	18241A0130	Karri Bharath Chandra Reddy
33	18241A0131	Kuppala Nihar
34	18241A0132	Kurva Lavanya

35	18241A0133	Maddimsetty Sri Charan
36	18241A0134	MagaPor Manaswini
37	18241A0135	Maloth Bhavsingh
38	18241A0136	Malothu Naveena
39	18241A0137	Manda Ithihas
40	18241A0138	Mohammad Ashfaq Ahmed
41	18241A0139	Mohammed Omer Shareef
42	18241A0140	Mukundu Naveen
43	18241A0141	Nalumasu Sahithi
44	18241A0142	Nampelly Ravi Kumar
45	18241A0143	Narra Shashidhar Reddy
46	18241A0144	Patlola Vinay Reddy
47	18241A0145	Pattambetty Pavankumar
48	18241A0146	Pola Tharun
49	18241A0147	Posani S V A Kalyan
50	18241A0148	Pulle Manichadra
51	18241A0149	Rajulapati Rohit Naga Sai
52	18241A0150	Sura Subbaram Reddy
53	18241A0153	Sunkari Vikas
54	18241A0154	Thirupathi Rao Salla
55	18241A0155	Trivikram Reddy
56	18241A0156	Thrupti Shreya
57	18241A0157	Vakamalla Bhavya Sree
58	18241A0158	Vemula Manisha
59	18241A0159	Vuppula Keerthana
60	18241A0160	Yalla Anitha
61	19245A0101	KANCHERLA BHARATH
62	19245A0102	ELUPULA KUMARASWAMY
63	19245A0103	BRAHMADEVARA BHAVITHA
64	19245A0104	DASARI NAMRATHA
65	19245A0105	T CHANDANA
66	19245A0106	KOLA HARITHA
67	16241A0161	Abdul Samad
68	18241A0161	A Nachiketh
69	18241A0162	Aleti Jagadish
70	18241A0163	Amirneni Anusha
71	18241A0164	Anireddy Avinash
72	18241A0165	Ashitha Golla
73	18241A0166	Animesh Baathuk
74	18241A0167	Boppu Lokesh
75	18241A0168	Budagam Harshith
76	18241A0169	Chilumula Sridhar
77	18241A0170	Dandre Vennela

78	18241A0171	Doti Upender
79	18241A0172	Eda Manasa
80	18241A0173	Gonda Harshini
81	18241A0174	Gore Kamalakar Sailesh
82	18241A0175	Gore Kamalakar Sandeep
83	18241A0176	Guddati Arun
84	18241A0177	Vijay Narasimha Reddy Kolagtla
85	18241A0178	Kancharakuntla Deepika
86	18241A0179	Kota Rashmitha
87	18241A0180	Kothuri Pranay
88	18241A0181	Kudala Rama
89	18241A0182	Kummari Srilekha
90	18241A0183	Kunchala Adarsh
91	18241A0184	Kurra Neeraj Prasad
92	18241A0185	Kyama Pavan
93	18241A0186	M Shekhar
94	18241A0187	Malraj Manvitha
95	18241A0188	Matharasi Sai Kumar
96	18241A0189	Md Ameer Sohail
97	18241A0190	Md Amir
98	18241A0191	Medari Vikram Aditya
99	18241A0192	Mediga Karthik
100	18241A0193	Moniesh Reddy Sunkara
101	18241A0194	Kaushik Nadella
102	18241A0195	Nikhitha Kasuvojula
103	18241A0196	Nunavath Suman
104	18241A0197	P Kishore
105	18241A0198	Peesu Spandana Reddy
106	18241A0199	Prathyusha Maddala
107	18241A01A0	Bavanari Pratyush
108	18241A01A1	Putta Rohith
109	18241A01A2	Rahul Pradhan
110	18241A01A3	Rampelli Pravalika
111	18241A01A4	Rangu Soniya
112	18241A01A5	Rental Adarsh Reddy
113	18241A01A6	Ritish J
114	18241A01A7	Seelam Rahul Goud
115	18241A01A8	Shaik Afeez
116	18241A01A9	Shaik Shoaib
117	18241A01B0	Shivarathri Sai Kumar
118	18241A01B1	Shivarathri Tharun

119	18241A01B2	Sowmika Boyapati
120	18241A01B3	Vishruth Reddy T N
121	18241A01B4	Tekula Prashanth Reddy
122	18241A01B5	Teegala Someshwar Reddy
123	18241A01B6	Thatipamula Vigna Sai
124	18241A01B7	Thota Sri Sai
125	18241A01B8	Vedati Manikanta Karthik
126	18241A01B9	Vallapu Reddy Sushrutha
127	18241A01C0	Yanala Rithish Reddy
128	19245A0107	CHOUGONI SHIVASHANKAR
129	19245A0108	KOTA ANVESH
130	19245A0109	POLAGANI CHANDU GOUD
131	19245A0110	SADGARI KARTHIK
132	19245A0111	GUGULOTHU PAVAN
133	19245A0112	A RAGHAVENDRA

GUIDELINES TO STUDY THE COURSE/SUBJECT

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Guidelines to Students:

Guidelines to study the course / subject: Project Management & Entrepreneurship

This course aids in understanding the importance of Construction Management. Students will learn to prepare the construction schedules. This course enables students understand Different construction methods and soil tests. Students will be able to understand the testing procedures in inspection. This course helps students to learn Entrepreneurship.

So the students should have the following pre-requisites:

1. Knowledge of Construction materials
2. Knowledge of mathematics and statistics
3. Knowledge of geotechnical properties of soil
4. Basics of Building materials

Where will this subject help?

- a. Useful in developing construction schedules.
- b. Useful in predicting the project delays and reasons and probability of completion of projects.
- c. Helps to understand the testing procedure in inspection testing.
- d. Gives the knowledge of several types of construction methods.
- e. Helps in enhancing their view on Entrepreneurship

Books / Material:

Text Books

1.	Jha, Kumar Neeraj., Construction Project management, Theory & Practice, Pearson Education India, 2015.
2.	Punmia, B.C., Khandelwal, K.K., Project Planning with PERT and CPM, Laxmi Publications, 2016.
3.	Peurifoy, R.L. Construction Planning, Methods and Equipment, McGraw Hill, 2011.
4.	Chudley, R., Construction Technology, ELBS Publishers, 2007.
5	Robert D. H, Michael P. P, Dean A. S, Sabyasachi S, Entrepreneurship ,Mc Graw hill , 11 th Edition 2020.

References

1.	Nunnally, S.W. Construction Methods and Management, Prentice Hall, 2006.
2.	National Building Code, Bureau of Indian Standards, New Delhi, 2017.

Course Design and Delivery System (CDD):

- The Course syllabus is written into number of learning objectives and outcomes.
- These learning objectives and outcomes will be achieved through lectures, assessments, assignments, experiments in the laboratory, projects, seminars, presentations, etc.
- Every student will be given an assessment plan, criteria for assessment, scheme of evaluation and grading method.
- The Learning Process will be carried out through assessments of Knowledge, Skills and Attitude by various methods and the students will be given guidance to refer to the text books, reference books, journals, etc.

The faculty be able to –

- Understand the principles of Learning
- Understand the psychology of students
- Develop instructional objectives for a given topic
- Prepare course, unit and lesson plans
- Understand different methods of teaching and learning
- Use appropriate teaching and learning aids
- Plan and deliver lectures effectively
- Provide feedback to students using various methods of Assessments and tools of Evaluation
- Act as a guide, advisor, counselor, facilitator, motivator and not just as a teacher alone

Signature of HOD

Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology
(Autonomous)**

Bachupally, Kukatpally, Hyderabad – 500 090, India

COURSE SCHEDULE

Academic Year : 2021-2022

Semester:I

Name of the Program : B.Tech **Year:** IV Year

Section: A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

The Schedule for the whole Course / Subject is:

1	Commencement of First Semester class work	16-08-2021	
2	I Spell of Instructions	16-08-2021 to 16-10-2021	9 Weeks
3	I Mid-term Examinations	18-10-2021 to 20-10-2021	3 Days
4	II Spell of Instructions	21-10-2021 to 08-12-2021	7 Weeks
5	II Mid-term Examinations	09-12-2021 to 11-12-2021	3 Days
6	Preparation	13-12-2021 to 18-12-2021	1 Week
7	End Semester Examinations (Theory/ Practical) Regular/ Supplementary	20-12-2021 to 08-01-2021	3 Weeks
8	Commencement of Second Semester, AY 2020-21	10-01-2021	

1. Total No. of Instructional periods available for the course: **62** Hours / Periods



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering

COURSE SCHEDULE

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

The Schedule for the whole Course / Subject is:

S. No.	Description	Duration (Date)		Total No. Of Periods
		From	To	
1.	UNIT-I Construction project planning	16/08/2021	23/08/2021	8
2.	UNIT-II Construction Project Monitoring	26/08/2021	04/10/2021	10
3.	UNIT-III Construction Methods basics	06/10/2021	27/10/2021	10
4.	UNIT-IV Construction Equipment basics	01/11/2021	15/11/2021	12
5.	UNIT-V Entrepreneurship	17/11/2021	08/12/2021	14

Total No. of Instructional periods available for the course: **62** Hours / Periods



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

SESSION PLAN

S.No.	Date	Unit	Topic
1	16-8-2021	I	Introduction to construction project management
2	19-8-2021		Construction planning and steps involved in different stages
3	20-8-2021		Construction Scheduling
4	23-8-2021		Gantt charts and improved methods
5	26-8-2021	II	introduction CPM AND PERT
6	27-8-2021		Basic terminology, types of precedence relationships Preparation of CPM Networks for Construction Activities
7	27-8-2021		Critical Path, Float-Types of Float, computation of Float values
8	06-09-2021		Problems on CPM
9	13-09-2021		Work break-down structure, Three-Time Estimate
10	20-09-2021		PERT Assumptions underlying PERT analysis introduction and three time estimates
11	22-09-2021		analysis, slack computations
12	25-09-2021		Calculation of probability of completion, PERT problems solving
13	27-09-2021		PERT problem solving, Difference between CPM and PERT
14	04-10-2021		PERT problem solving, Introduction to Construction Methods
15	06-10-2021	III	Types of foundations and construction methods
16	11-10-2021		Basics of Formwork and Striping of Formwork
17	13-10-2021		Common building construction methods conventional walls and slabs
18	25-10-2021		conventional framed structure with block work walls and Pre cast construction methods
19	27-10-2021		Project Quality Plan (PQP) and Testing methods, Method Statements, Inspection and Test Plans (ITPs), Quality Control ,Quality Assurance, Acceptance Criteria of Concrete
20	01-11-2021	IV	Construction Equipment basics, Conventional construction methods Vs Mechanized methods and advantages of Mechanized methods
21	03-11-2021		Equipment for Excavation-Excavators, Front End Loaders and Earthmoving-Tippers
22	08-11-2021		Compaction of Soils, OMC, Dozers, Motor graders, Rollers-Static and Vibratory (Tandem)
23	10-11-2021		Field Tests to Test Density of Soils-Core Cutting, Sand Replacement and Nuclear Density Gauge. Concrete Mix-Nominal and Design Mix.

24	15-11-2021		Concrete mixing – Batching Plants, transporting (Transit Mixers) and placing - Concrete Pumping and Boom Placers, Cranes, Tower Crane.
25	17-11-2021	V	Concept of Entrepreneurship – entrepreneurs; Types of Entrepreneurships, Importance of Entrepreneurship
26	22-11-2021		Main Characteristics of Entrepreneurship, Purpose of Entrepreneurship
27	24-11-2021		Nature of Entrepreneurship, 10 characteristics of Entrepreneurs, Examples of Entrepreneurship
28	29-12-2021		How do you start Entrepreneurship, Benefits of Entrepreneurship
29	01-12-2021		Difference between Entrepreneurship and Business and risks of Entrepreneurship
30	06-12-2021		7 Practical Tips to Become an Entrepreneur with No Money
31	08-12-2021		Social Entrepreneurship, Challenges of Social Entrepreneurship.

Gokaraju Rangaraju Institute of Engineering and Technology



Department of Civil Engineering

SCHEDULE OF INSTRUCTIONS UNIT PLAN

Academic Year : 2021-2022

UNIT NO: 1

Semester : I

Name of the Program : B.Tech **Year:** IV Year

Section: A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

S. No.	Date	No. of Periods	Topics / Sub – Topics	References
1.	16/08/2021	1	Introduction to construction project management	Text Book 1 & 2
2.	16/08/2021	1	Importance of construction project management	Text Book 1 & 2
3.	19/08/2021	1	Construction planning	Text Book 1 & 2
4.	19/08/2021	1	Steps involved in different stages in Construction planning	Text Book 1 & 2
5.	20/08/2021	1	Construction Scheduling	Text Book 1 & 2
6.	20/08/2021	1	Steps involved in different stages in Construction Scheduling	Text Book 1 & 2
7.	23/08/2021	1	Gantt charts and improved methods	Text Book 1 & 2
8.	23/08/2021	1	Work breakdown structure	Text Book 1 & 2

Signature of HOD

Date:

Signature of faculty

Date:

Gokaraju Rangaraju Institute of Engineering and Technology



Department of Civil Engineering SCHEDULE OF INSTRUCTIONS UNIT PLAN

Academic Year : 2021-2022

UNIT NO: 2

Semester : I

Name of the Program : B.Tech **Year:** IV Year

Section: A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

S.No	Date	No. of Periods	Topics / Sub – Topics	References
1.	26-8-2021	2	Introduction CPM AND PERT	Text Book 1 & 2
2.	27-8-2021	2	Basic terminology, types of precedence relationships Preparation of CPM Networks for Construction Activities	Text Book 1 & 2
3.	27-8-2021	2	Critical Path, Float-Types of Float, computation of Float values	Text Book 1 & 2
4.	06-09-2021	2	Problems on CPM	Text Book 1 & 2
5.	13-09-2021	2	Work break-down structure, Three-Time Estimate	Text Book 1 & 2
6.	20-09-2021	2	PERT Assumptions underlying PERT analysis introduction and three time estimates	Text Book 1 & 2
7.	22-09-2021	2	analysis, slack computations	Text Book 1 & 2
8.	25-09-2021	2	Calculation of probability of completion, PERT problems solving	Text Book 1 & 2
9.	27-09-2021	2	PERT problem solving, Difference between CPM and PERT	Text Book 1 & 2

10.	04-10-2021	2	PERT problem solving, Introduction to Construction Methods	Text Book 1 & 2
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Signature of HOD

Signature of faculty

Date:

Date:



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering SCHEDULE OF INSTRUCTIONS UNIT PLAN

Academic Year : 2021-2022

UNIT NO:3

Semester : I

Name of the Program : B.Tech **Year:** IV Year

Section: A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No.	Date	No. of Periods	Topics / Sub – Topics	References
1.	06-10-2021	2	Types of foundations and construction methods	Text Book 3
2.	11-10-2021	2	Basics of Formwork and Striping of Formwork	Text Book 3
3.	13-10-2021	2	Common building construction methods conventional walls and slabs	Text Book 3
4.	25-10-2021	2	conventional framed structure with block work walls and Pre cast construction methods	Text Book 3

Signature of HOD

Signature of faculty

Date:

Date:



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering SCHEDULE OF INSTRUCTIONS UNIT PLAN

A Academic Year : 2021-2022

UNIT NO: 4

Semester : I

Name of the Program : B.Tech **Year:** IV Year

Section: A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	References
1.	01-11-2021	2	Construction Equipment basics, Conventional construction methods Vs Mechanized methods and advantages of Mechanized methods	Text Book 3 & 4
2.	03-11-2021	2	Equipment for Excavation- Excavators, Front End Loaders and Earthmoving-Tippers	Text Book 3 & 4
3.	08-11-2021	2	Compaction of Soils, OMC, Dozers, Motor graders, Rollers-Static and Vibratory (Tandem)	Text Book 3 & 4
4.	10-11-2021	2	Field Tests to Test Density of Soils- Core Cutting, Sand Replacement and Nuclear Density Gauge. Concrete Mix-Nominal and Design Mix.	Text Book 3 & 4

Signature of HOD

Date:

Signature of faculty

Date:



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

**SCHEDULE OF INSTRUCTIONS
UNIT PLAN**

Academic Year : 2021-2022

UNIT NO: 5

Semester : I

Name of the Program : B.Tech **Year:** IV Year

Section: A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	References
1.	17-11-2021	1	Concept of Entrepreneurship – entrepreneurs; Types of Entrepreneurships, Importance of Entrepreneurship	Text Book 5
2.	22-11-2021	1	Main Characteristics of Entrepreneurship, Purpose of Entrepreneurship	Text Book 5
3.	24-11-2021	1	Nature of Entrepreneurship, 10 characteristics of Entrepreneurs, Examples of Entrepreneurship	Text Book 5
4.	29-12-2021	1	How do you start Entrepreneurship, Benefits of Entrepreneurship	Text Book 5
5.	01-12-2021	1	Difference between Entrepreneurship and Business and risks of Entrepreneurship	Text Book 5
6.	06-12-2021	1	7 Practical Tips to Become an Entrepreneur with No Money	Text Book 5
7.	08-12-2021	1	Social Entrepreneurship, Challenges of Social Entrepreneurship	Text Book 5

Signature of HOD

Date:

Signature of faculty

Date:



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 1

Duration of Lesson: 60 min

Lesson Title: Introduction to construction project management

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

To understand what construction management is

TEACHING AIDS : Newton , Google classroom

TEACHING POINTS :

Introduction to construction project management

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 2

Duration of Lesson: 60 min

Lesson Title Construction planning and steps involved in different stages

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

To understand what construction management is

TEACHING AIDS : Newton , Google classroom

TEACHING POINTS :

Construction planning and steps involved in different stages

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology Department of
Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 3

Duration of Lesson: 60 min

Lesson Title :Construction Scheduling

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Identify different scheduling techniques

TEACHING AIDS : Newton , Google classroom

TEACHING POINTS :

Construction Scheduling

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 4

Duration of Lesson: 60 min

Lesson Title : Gantt charts and improved methods

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Apply gantt chart as construction scheduling technique

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Gantt charts and improved methods

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 5

Duration of Lesson: 60 min

Lesson Title : Introduction CPM AND PERT

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Understand basic differences between CPM and PERT

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Introduction CPM AND PERT

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 6

Duration of Lesson: 60 min

Lesson Title: Basic terminology, types of precedence relationships Preparation of CPM Networks for Construction Activities

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Build CPM Networks

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Basic terminology, types of precedence relationships Preparation of CPM Networks for Construction Activities

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 7

Duration of Lesson: 60 min

Lesson Title: Critical Path, Float-Types of Float, computation of Float values

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Compute various floats

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Critical Path, Float-Types of Float, computation of Float values

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 8

Duration of Lesson: 60 min

Lesson Title: Problems on CPM

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Solve several CPM Problems

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Problems on CPM

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 9

Duration of Lesson: 60 min

Lesson Title : Work break-down structure, Three-Time Estimate

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Prepare three time estimate

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Work break-down structure, Three-Time Estimate

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year**: IV Year **Section**: A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 10

Duration of Lesson: 60 min

Lesson Title : PERT Assumptions underlying PERT analysis introduction and three time estimates

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Interpret the importance of PERT

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

PERT Assumptions underlying PERT analysis introduction and three time estimates

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 11

Duration of Lesson: 60 min

Lesson Title : Analysis, slack computations

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Compute and analyze slack

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Analysis, slack computations

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 12

Duration of Lesson: 60 min

Lesson Title : Calculation of probability of completion, PERT problems solving

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Calculate the probability of completion of different projects

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Calculation of probability of completion, PERT problems solving

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 13

Duration of Lesson: 60 min

Lesson Title : PERT problem solving, Difference between CPM and PERT INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Solve varied PERT Problems and differentiate it's use from CPM

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

PERT problem solving, Difference between CPM and PERT

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 14

Duration of Lesson: 60 min

Lesson Title : PERT problem solving

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Solve varied PERT Problems

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

PERT problem solving

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 15

Duration of Lesson: 60 min

Lesson Title : PERT problem solving, Introduction to Construction Methods

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

PERT problem solving, Introduction to Construction Methods

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

PERT problem solving, Introduction to Construction Methods

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 16

Duration of Lesson: 60 min

Lesson Title :Types of foundations and construction methods

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Understand various construction methods of foundations

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Types of foundations and construction methods

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 17

Duration of Lesson: 60 min

Lesson Title: Basics of Formwork and Striping of Formwork

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Have knowledge about formwork for various structural components

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Basics of Formwork and Striping of Formwork

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 18

Duration of Lesson: 60 min

Lesson Title: Basics of Formwork and Striping of Formwork

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Have knowledge about formwork for various structural components

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Basics of Formwork and Striping of Formwork

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 19

Duration of Lesson: 60 min

Lesson Title : Construction methods of different structural components

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

To understand what construction procedure of structural components are

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Construction methods of different structural components

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 20

Duration of Lesson: 60 min

Lesson Title : Common building construction methods conventional walls and slabs

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Connect and contrast between construction methods for walls and slabs

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Common building construction methods conventional walls and slabs

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 21

Duration of Lesson: 60 min

Lesson Title: conventional framed structure with block work walls and Pre cast construction methods

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Differentiate between framed structure and pre cast structure

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

conventional framed structure with block work walls and Pre cast construction methods

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 22

Duration of Lesson: 60 min

Lesson Title: Project Quality Plan (PQP) and Testing methods, Method Statements, Inspection and Test Plans (ITPs), Quality Control ,Quality Assurance, Acceptance Criteria of Concrete

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Assess procedure involved in testing for quality and inspection purposes

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Project Quality Plan (PQP) and Testing methods, Method Statements, Inspection and Test Plans (ITPs), Quality Control ,Quality Assurance, Acceptance Criteria of Concrete

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 23

Duration of Lesson: 60 min

Lesson Title: Construction Equipment basics, Conventional construction methods Vs Mechanized methods and advantages of Mechanized methods

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Associate construction methods with construction equipment

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Construction Equipment basics, Conventional construction methods Vs Mechanized methods and advantages of Mechanized methods

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 24

Duration of Lesson: 60 min

Lesson Title : Equipment for Excavation-Excavators, Front End Loaders and Earthmoving-Tippers

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Understand the use of Equipment for Excavation-Excavators, Front End Loaders and Earthmoving-Tippers

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Equipment for Excavation-Excavators, Front End Loaders and Earthmoving-Tippers

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 25

Duration of Lesson: 60 min

Lesson Title : Compaction of Soils, OMC, Dozers, Motor graders, Rollers-Static and Vibratory (Tandem)

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Identify the importance of compaction of soil and different equipment involved in compaction

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Compaction of Soils, OMC, Dozers, Motor graders, Rollers-Static and Vibratory (Tandem)

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 26

Duration of Lesson: 60 min

Lesson Title: Field Tests to Test Density of Soils-Core Cutting, Sand Replacement and Nuclear Density Gauge

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Discover methods available to gauge the density of soil.

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Field Tests to Test Density of Soils-Core Cutting, Sand Replacement and Nuclear Density Gauge

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 27

Duration of Lesson: 60 min

Lesson Title: Concrete Mix-Nominal and Design Mix.

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Differentiate between nominal mix and design mix

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Concrete Mix-Nominal and Design Mix.

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 28

Duration of Lesson: 60 min

Lesson Title : Concrete mixing – Batching Plants, transporting (Transit Mixers) and placing - Concrete Pumping and Boom Placers, Cranes, Tower Crane.

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Understand the process involved in transportation, mixing and placing of concrete **TEACHING AIDS**

: Projector, White board, demonstration

TEACHING POINTS :

Concrete mixing – Batching Plants, transporting (Transit Mixers) and placing - Concrete Pumping and Boom Placers, Cranes, Tower Crane.

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 29

Duration of Lesson: 60 min

Lesson Title : Concept of Entrepreneurship – entrepreneurs; Types of Entrepreneurships,
Importance of Entrepreneurship

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Interpret the basic concepts of Entrepreneurship

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Concept of Entrepreneurship – entrepreneurs; Types of Entrepreneurships,
Importance of Entrepreneurship

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 30

Duration of Lesson: 60 min

Lesson Title: Main Characteristics of Entrepreneurship, Purpose of Entrepreneurship

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Identify main characteristics of Entrepreneurship

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Main Characteristics of Entrepreneurship, Purpose of Entrepreneurship

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 31

Duration of Lesson: 60 min

Lesson Title : Nature of Entrepreneurship, 10 characteristics of Entrepreneurs INSTRUCTIONAL/LESSON

OBJECTIVES:

On completion of this lesson the student shall be able to:

Characterize the nature of en Entrepreneurship

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Nature of Entrepreneurship, 10 characteristics of Entrepreneurs

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 32

Duration of Lesson: 60 min

Lesson Title :Examples of Entrepreneurship

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Observe qualities of Entrepreneur

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Examples of Entrepreneurship

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 33

Duration of Lesson: 60 min

Lesson Title: How do you start Entrepreneurship, Benefits of Entrepreneurship

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Develop methods to start Entrepreneurship and understand it's benefits

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

How do you start Entrepreneurship, Benefits of Entrepreneurship

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 34

Duration of Lesson: 60 min

Lesson Title: Difference between Entrepreneurship and Business and risks of Entrepreneurship

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Discriminate between Entrepreneurship and Business

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Difference between Entrepreneurship and Business and risks of Entrepreneurship

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 35

Duration of Lesson: 60 min

Lesson Title :7 Practical Tips to Become an Entrepreneur with No Money

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Learn practical tips to become Entrepreneur

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

7 Practical Tips to Become an Entrepreneur with No Money

Assignment / Questions:

Signature of faculty



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering
LESSON PLAN

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Lesson No : 35

Duration of Lesson: 60 min

Lesson Title : Social Entrepreneurship, Challenges of Social Entrepreneurship.

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Point out the importance of Social Entrepreneurship

TEACHING AIDS : Projector, White board, demonstration

TEACHING POINTS :

Social Entrepreneurship, Challenges of Social Entrepreneurship.

Assignment / Questions:

Signature of faculty

Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering
COURSE COMPLETION STATUS

Academic Year : 2021-2022

Semester : I

Name of the Program : B.Tech **Year:** IV Year **Section:** A/B

Course/Subject : Project Management & Entrepreneurship

Course Code: GR18A4002

Name of the Faculty : T.Jahnavi

Designation: Assistant Professor

Dept.: Civil Engineering

Actual Date of Completion & Remarks, if any

Units	Remarks	Objectives Achieved	Outcomes Achieved
UNIT - I	Covered on time	1	1
UNIT - II	Covered on time	2	2
UNIT - III	Covered on time	3	3
UNIT – IV	Covered on time	4	4
UNIT - V	Covered on time	5	5

Signature of HOD

Signature of faculty

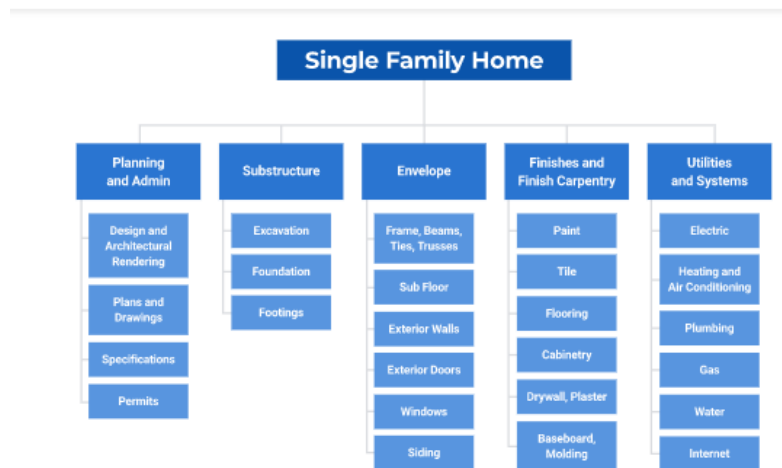
Date:

Date:

Note: After the completion of each unit mention the number of Objectives & Outcomes Achieved.

TUTORIAL-1

For the following WBS prepare schedule based on civil engineering knowledge



TUTORIAL-2

The following table shows the list of activities along with their time estimates. Activity Duration (Weeks)

Draw the network. Find estimated activity duration, variance of each activity, and slack for each event.

Activity	Duration (Weeks)		
	t_o	t_m	t_p
1-2	3	6	15
1-6	2	8	14
2-3	6	12	30
2-4	2	5	8
3-5	5	11	17
4-7	3	6	15
.5-8	1	4	7
6-7	3	9	27
7-8	4	19	28

TUTORIAL-3

Draw different types of brick bonds available in brick masonry

TUTORIAL-4

An embankment for a highway 30 m wide and 1.5 m compacted thickness is to be constructed from sandy soil trucked from a borrow pit. The water content of the sandy soil in the borrow pit is 15% and its void ratio is 0.69. The specification requires the embankment compacted to a dry unit weight of 18 kN/m³. Determine for 1 km length of embankments that following

- i) The dry unit weight of sandy soil from the borrow pit required to construct the embankment.
- ii) The number of 10 m³ truckloads of sandy soil required for the construction.
- iii) The degree of saturation of the sandy soil in-situ.

TUTORIAL-5

Write a good example of Social Entrepreneurship

ASSIGNMENT -1

Prepare Gantt chart for the following data

Activity name	Start Date	Duration
Foundation	1-Jun	10
Walls	12-Jun	7
Roof	20-Jun	10
Windows&Doors	1-Jul	5
Plumbing	7-Jul	3
Electric works	7-Jul	3
Painting	11-Jul	2
flooring	13-Jul	2

ASSIGNMENT -2

- 1.A.What are Direct and Indirect Costs .
B.What are The Demerits of Pert
- 2 .Mention the Procedure Followed in Project Crashing.

ASSIGNMENT-3

- 1.Write about quality control and quality assurance in construction.
- 2.Mention and describe different formwork used in construction and stripping of formwork.
- 3.Sketch and discuss various brick bonds in brick masonry.
- 4.Explain non-destructive testing on concrete.

ASSIGNMENT-4

- 1.Write brief note on front end loaders, Dozers and earth moving tippers with their parts.
- 2.Explain types of rollers and their usage.
- 3.Write the advantages and disadvantages of using design mix .
- 4.What are the insitu methods of measuring soil density`

ASSIGNMENT-5

- 1.Explain the importance of entrepreneurship.
- 2.Explain risks involved in entrepreneurship.
- 3.Write brief note on social entrepreneurship and challenges involved in it.



**Gokaraju Rangaraju Institute of Engineering and Technology Department of
Civil Engineering
EVALUATION STRATEGY**

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech, Civil Engineering Year: IV year Section: A & B

Course: PROJECT MANAGEMENT AND ENTREPRENEURSHIP Course Code: GR18A4002

Name of the Faculty: T.JAHNAVI Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

1. TARGET:

- a) Percentage for pass: 100%
- b) Percentage of class:

First class with distinction	60
First class	105
Pass class	133
Total strength	133

2. COURSE PLAN & CONTENT DELIVERY

61 classes classroom held for detailed demonstration of each course unit and practice of tutorials .

3. METHOD OF EVALUATION

3.1 Continuous Assessment Examinations (CAE-I, CAE-IV)

3.2 Assignments/Seminars

3.3 Mini Projects

3.4 Quiz

3.5 Semester/End Examination

3.6 Others

4. List out any new topic(s) or any innovation you would like to introduce in teaching the subjects in this Semester.

Signature of HOD
Date:

Signature of faculty
Date:



Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous)
Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

Mappings of CO's, COB's Vs PO's, POB's

Course Objectives - Course Outcomes Relationship Matrix

Course Objectives \ Course Outcomes	Course Outcomes				
	1	2	3	4	5
1	X				
2		X			
3			X		
4				X	
5					X

Course Outcomes - Program Outcomes relations (Contributions: High, Medium and Low)

Code	Subject	Course Outcomes	Programme Outcomes														
			a	b	c	d	e	f	g	h	i	j	k	l	PSO 1	PSO 2	
GR18A40 02	PME	1	H	M	M												
		2	H	H	H	H				M				M			
		3	H	H	H	H		M		M				M	M	M	
		4	M	H	H	H			H	M		M		M		H	
		5	H	H	H	H					M		M		M	H	H

Course Objectives - Program Outcomes (PO's) Relationship Matrix

Program Outcomes												
	a	b	c	d	e	f	g	h	i	j	k	l
Course Objectives												
1	X					X	X	X	X	X	X	X
2	X					X	X	X	X	X	X	X
3	X	X		X	X	X	X	X	X	X	X	X
4	X					X	X	X	X	X	X	X
5	X					X	X	X	X	X	X	X

Course Outcomes - Program Outcomes relations (PO's) Relationship Matrix

Program Outcomes												
	a	b	c	d	e	f	g	h	i	j	k	l
Course Outcomes												
1	X					X	X	X	X	X	X	X
2	X					X	X	X	X	X	X	X
3	X					X	X	X	X	X	X	X
4	X					X	X	X	X	X	X	X

Assignments& Assessments-Program Educational Objectives (PEO's) Relationship Matrix

Assessment:

1. Assignment
2. Internal Examination
3. External Examination
4. Practical Projects
5. Viva

PEOs \ Assessments	1	2	3
1	X	X	X
2	X	X	X
3	X	X	X
4	X	X	X
5	X	X	X



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Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

Rubric Template – PME

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech, Civil Engineering

Year: IV year

Section: A & B

Course: PROJECT MANAGEMENT & ENTREPRENEURSHIP Course Code: GR18A4002

Name of the Faculty: T.JAHNAVI

Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Students Outcomes:

		Beginni ng	Developing	Reflecting Development	Accomplished	Exemplary	Score
Name of the Student	Performance Criteria	1	2	3	4	5	
18241A0112	Identify various building materials and their structural requirements.	Low level	Able to understand	Ability to explain	Full knowledge	Thoroughly analyzing & applying	
	Explain the significance of cement and lime in construction.	Low level	Able to understand	Ability to explain	Full knowledge	Thoroughly analyzing & applying	
	Identify the suitable material for construction and various building components.	Low level	Able to understand	Ability to explain	Full knowledge	Thoroughly analyzing & applying	
	Review different types of masonry construction.	Low level	Able to understand	Ability to explain	Full knowledge	Thoroughly analyzing & applying	



ss about
s building
es and
planning and
their
characteristics

Low
level

Able to
understand

Ability to
explain

Full
knowledge

Thoroughly
analyzing &
applying

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

IV B.TECH. I SEM., I MID-TERM EXAMINATION, October-2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Time: 10 min

Max. Marks: 5

I Multiple choice Questions

1. Which of the following are project scheduling techniques []
A) Bar charts B) Milestone charts
C).CPM and PERT D) All of the above
2. Construction of bridge comes under industrial constructions
True [] False []
3. Resources refers to
A) Manpower B) Machinery C) Materials D) All of the above
4. The difference between the time available to do a job and the time required to do the job, is known as []
A). event B). float
C). duration D). constraint.
5. Rectified model of bar chart is called _____ []
A) Linked bar chart B) Vertical chart
C) Variation chart D) Revaluation chart
6. Which of the following is not a tool for scheduling? []
A) Critical path method B) Gantt charts C) PERT D) Log scale chart
- 7 . PERT analysis is based on _____ []
A)optimistic time B) pessimistic time
C). most likely time D)all the above.
- 8 . CPM stands for []
A) Conditional program method B) Core program method
C) Critical path method D) Critical program method
- 9 If a is the optimistic time, b is the pessimistic time and m is most likely time of an activity, the expected time of the activity _____ []
A). a+m+b B).(a+m+b)/6

C). $(a+4m+b)/6$ D). $(b-a)/6$

10. Project crashing is applied on non critical activities

TRUE [] FALSE[]

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

IV B.Tech, I Sem, I MID-Term Examinations, October 2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Department of Civil Engineering

Duration: 90min

MAX Marks: 15 Marks

SUBJECTIVE

Answer any three Out of Four

3*5 = 15 Marks

1. Discuss briefly about pre-tender stage and contract stage of project planning. **[BT2]**
2. Draw the Network diagram for the following data and find the critical path using floats. Also find the project duration. **[BT1]**

Compute total float for activities F,J,M

Succeeding activities	Preceding activities	Activities	Duration (Days)
A & B	---	A	10
C	B	B	5
D	A	C	3
E	C	D	6
F	C	E	7
G	F	F	6
H	G	G	5
I	C	H	8
J	H & I	I	4
K	E, J & D	J	6
L	H & I	K	4
M	K & L	L	3
		M	2

3. a) List out any three differences between CPM & PERT Networks **[BT1]**
b) Distinguish between the free, independent and interfering floats. **[BT2]**
4. For the following network determine estimated times for all activities. **[BT1]**

Find the probability the project is completed in 25 days(refer z-table)

Activity Name	T ₀	t _m (in days)	t _p
A	4	6	8
B	2	3	10
C	6	8	16
D	1	2	3
E	6	7	8
F	6	7	14
G	3	5	7
H	4	11	12
I	2	4	6
J	2	9	10



GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

IV B.TECH. I SEM., II MID-TERM EXAMINATION, December-2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Time: 10 min

Max. Marks: 5

I Multiple choice Questions

3. Which of the following bonds have alternate courses of stretchers & headers

[]

- A).Flemish bond B) English bond
C).Header bond D).Garden wall bond

4. For small and repetitive works timber formwork cannot be used

True [] False[]

3.Which of the following equipment is useful for bank sloping []

- A).Graders B) .Excavators C). Cranes D). All of the above

4 Which of the following comes under deep foundation []

- A). Strip footing B).Combined footing
C). Caisson foundation D).Isolated footing

5. In core testing of concrete the average equivalent cube strength of the cores is equal to at least _____% of the cube strength of the grade of concrete specified []

- A) 85 B) 95
C) 75 D) 90

6. What is the maximum possible grade of concrete that can be obtained using nominal mix? []

- A).M30 B) .M15 C) .M20 D). M50

7 . Optimum moisture content is found based on []

- A).Natural water content B).Maximum dry density
C). Maximum bulk density D).None the above.

8 Which type of compactor is suitable for cohesive soft soil []

- A) Pneumatic wheel roller B) Single drum roller
C) Sheep foot roller D) Plate compactor

9 The initial investment in any business or entrepreneurship is []

- A). Capital B).Interest amount
C).Returns D).

10. Social entrepreneurship is done in the direct view of corporate benefit

TRUE [] FALSE[]

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
IV B.Tech, I Sem, IInd MID-Term Examinations, December 2021



PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Department of Civil Engineering

Duration: 90min

MAX Marks: 15 Marks

SUBJECTIVE

Answer any three Out of Four

3*5 = 15 Marks

- a).Write the process involved in stripping of concrete. (2 marks)[**BT1**]
b).Sketch and explain about different brick bonds available in brick masonry (3 marks)[**BT2**]
- Briefly describe about the components and usage of excavators and dozers.[**BT2**]
- Differentiate between nominal mix and design mix.[**BT2**]
- a).Write about good entrepreneurship with an example.(2.5 marks)[**BT2**]
b).Distinguish between business and entrepreneurship.(2.5 marks)[**BT2**]

PME INTERNAL MARKS:

A-SECTION:

Roll Number	Student Name	MID I (20)	MID II(20)
17241A0153	Sujith Kumar Shinde	5	13
17241A0157	Vuppula Mithunkumar Reddy	7	12
18241A0101	Ajmeera Ganesh	7	10
18241A0102	Anabotula Sravani	11	20
18241A0103	Anumatla Manoj	12	20
18241A0104	Byna Rishitha	11	17
18241A0105	Bura Tharasri	13	17
18241A0106	Pudari Badrinath Goud	3	7
18241A0107	Balasani Rohith	15	15
18241A0108	Bandari Veeraswamy	15	17
18241A0109	Bandi Varun Kumar	5	5
18241A0110	Bashipaka Pradeep	8	15
18241A0111	Bathula Nikhil	6	13
18241A0112	Batikiri Veerendra Swamy	20	15
18241A0113	Bhukya Soujanya	6	14
18241A0114	Bhukya Varun Naik	15	19
18241A0115	Boddu Pavan	14	18
18241A0116	Byagari Rangaraju	12	14
18241A0117	Chada Ruchita	15	14
18241A0118	Chinthakuntla Thriveen	12	14
18241A0119	Cv Jaswanth Surya	3	13
18241A0120	Dosapati Nishu	15	15
18241A0121	G Prashanth	7	11
18241A0122	Gaddipati Lohitha	15	12
18241A0123	Gangam Rohit Reddy	5	10
18241A0124	Gottemukkala Govardhan	13	13
18241A0125	Hrishikesh Bansal	6	13
18241A0126	Janapati Raju	14	18
18241A0127	Jyothika Mannava	18	19
18241A0128	K Harshitha Reddy	18	18
18241A0129	Kolan Reshikesh Reddy	6	15
18241A0130	Karri Bharath Chandra Reddy	10	17
18241A0131	Kuppala Nihar	12	15
18241A0132	Kurva Lavanya	14	18
18241A0133	Maddimsetty Sri Charan	9	9
18241A0134	MagaPor Manaswini	20	18
18241A0135	Maloth Bhavsingh	9	13
18241A0136	Malothu Naveena	18	18
18241A0137	Manda Ithihas	15	16
18241A0138	Mohammad Ashfaq Ahmed	12	17

18241A0139	Mohammed Omer Shareef	18	15
18241A0140	Mukundu Naveen	AB	AB
18241A0141	Nalumasu Sahithi	15	13
18241A0142	Nampelly Ravi Kumar	13	16
18241A0143	Narra Shashidhar Reddy	13	15
18241A0144	Patlola Vinay Reddy	5	8
18241A0145	Pattambetty Pavankumar	8	15
18241A0146	Pola Tharun	11	17
18241A0147	Posani S V A Kalyan	12	13
18241A0148	Pulle Manichadra	5	14
18241A0149	Rajulapati Rohit Naga Sai	16	18
18241A0150	Sura Subbaram Reddy	4	7
18241A0153	Sunkari Vikas	19	17
18241A0154	Thirupathi Rao Salla	15	17
18241A0155	Trivikram Reddy	7	13
18241A0156	Thrupti Shreya	8	11
18241A0157	Vakamalla Bhavya Sree	17	14
18241A0158	Vemula Manisha	12	15
18241A0159	Vuppula Keerthana	16	17
18241A0160	Yalla Anitha	17	15
19245A0101	KANCHERLA BHARATH	18	13
19245A0102	ELUPULA KUMARASWAMY	20	15
19245A0103	BRAHMADEVARA BHAVITHA	19	17
19245A0104	DASARI NAMRATHA	15	17
19245A0105	T CHANDANA	18	19
19245A0106	KOLA HARITHA	10	18

B-SECTION:

Roll Number	Student Name	MID I (20)	MID II(20)
16241A0161	Abdul Samad	5	5
18241A0161	A Nachiketh	7	10
18241A0162	Aleti Jagadish	7	17
18241A0163	Amirneni Anusha	13	17
18241A0164	Anireddy Avinash	12	7
18241A0165	Ashitha Golla	13	12
18241A0166	Animesh Baathuk	5	14
18241A0167	Boppu Lokesh	6	18
18241A0168	Budagam Harshith	13	9
18241A0169	Chilumula Sridhar	14	18
18241A0170	Dandre Vennela	17	18

18241A0171	Doti Upender	13	15
18241A0172	Eda Manasa	15	19
18241A0173	Gonda Harshini	20	17
18241A0174	Gore Kamalakar Sailesh	6	15
18241A0175	Gore Kamalakar Sandeep	9	13
18241A0176	Guddati Arun	6	12
18241A0177	Vijay Narasimha Reddy Kolagtla	11	12
18241A0178	Kancharakuntla Deepika	14	13
18241A0179	Kota Rashmitha	5	9
18241A0180	Kothuri Pranay	7	11
18241A0181	Kudala Rama	4	13
18241A0182	Kummari Srilekha	20	19
18241A0183	Kunchala Adarsh	9	12
18241A0184	Kurra Neeraj Prasad	16	13
18241A0185	Kyama Pavan	4	8
18241A0186	M Shekhar	11	15
18241A0187	Malraj Manvitha	20	20
18241A0188	Matharasi Sai Kumar	11	13
18241A0189	Md Ameer Sohail	17	18
18241A0190	Md Amir	13	16
18241A0191	Medari Vikram Aditya	7	9
18241A0192	Mediga Karthik	14	16
18241A0193	Moniesh Reddy Sunkara	5	12
18241A0194	Kaushik Nadella	7	9
18241A0195	Nikhitha Kasuvojula	17	18
18241A0196	Nunavath Suman	18	14
18241A0197	P Kishore	2	7
18241A0198	Peesu Spandana Reddy	11	17
18241A0199	Prathyusha Maddala	16	18
18241A01A0	Bavanari Pratyush	17	18
18241A01A1	Putta Rohith	6	11
18241A01A2	Rahul Pradhan	16	19
18241A01A3	Rampelli Pravalika	14	16
18241A01A4	Rangu Soniya	18	18
18241A01A5	Rentalala Adarsh Reddy	16	18
18241A01A6	Ritish J	5	11
18241A01A7	Seelam Rahul Goud	6	13
18241A01A8	Shaik Afeez	13	15
18241A01A9	Shaik Shoaib	11	16
18241A01B0	Shivarathri Sai Kumar	9	16
18241A01B1	Shivarathri Tharun	11	17
18241A01B2	Sowmika Boyapati	14	18
18241A01B3	Vishruth Reddy T N	13	18
18241A01B4	Tekula Prashanth Reddy	13	13
18241A01B5	Teegala Someshwar Reddy	15	18

18241A01B6	Thatipamula Vigna Sai	13	15
18241A01B7	Thota Sri Sai	18	15
18241A01B8	Vedati Manikanta Karthik	16	19
18241A01B9	Vallapu Reddy Sushrutha	14	17
18241A01C0	Yanala Rithish Reddy	12	16
19245A0107	CHOUGONI SHIVASHANKAR	6	10
19245A0108	KOTA ANVESH	4	17
19245A0109	POLAGANI CHANDU GOUD	10	19
19245A0110	SADGARI KARTHIK	10	18
19245A0111	GUGULOTHU PAVAN	13	14
19245A0112	A RAGHAVENDRA	9	14



4.5

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

IV B.TECH. I SEM., I MID-TERM EXAMINATION, October-2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Time: 10 min

Max. Marks: 5

Name: Manvitha

Roll No. 18241A0187

Manvitha

I Multiple choice Questions

3. Construction of house comes under industrial constructions
True [] False [✓] ✓
4. Which of the following are project scheduling techniques [D] ✓
A) Bar charts B) Milestone charts
C) CPM and PERT D) All of the above
3. Resources refers to (D) ✓
A) Manpower B) Machinery C) Materials D) All of the above
- 4 The difference between the time available to do a job and the time required to do the job, is known as [B] ✓
A). event B). float
C). duration D). constraint.
5. Rectified model of bar chart is called [A] ✓
A) Linked bar chart B) Vertical chart
C) Variation chart D) Revaluation chart
6. CPM stands for [C] ✓
A) Conditional program method B) Core program method
C) Critical path method D) Critical program method
7. PERT analysis is based on [D] ✓
A) optimistic time B) pessimistic time
C). most likely time D) all the above.
8. Which of the following is not a tool for scheduling? [D] ✓
A) Critical path method B) Gantt charts C) PERT D) Log scale chart
- 9 If a is the optimistic time, b is the pessimistic time and m is most likely time of an activity, the standard deviation of the activity [C] ✓
A). $a+m+b$ B). $(a+m+b)/6$
C). $(a+4m+b)/6$ D). $(b-a)/6$
10. Project crashing is to reduce cost of the project
TRUE [] FALSE [✓] ✓



Gokaraju Rangaraju Institute of Engineering & Technology
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Bachupally, Kukatpally, Hyderabad - 500090

I II **MID TERM EXAMINATION**

Manitha

No.

375405

H.T. No.

18241A0187

Name of the Examination IV B.Tech I Sem Mid I Examination

Course Project management and entrepreneurship Branch Civil Engineering Date 29-10-2021

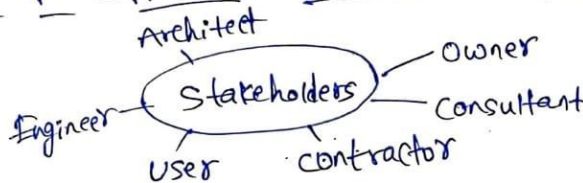
Signature of the Invigilator

Q.NO.	1		2		3		4		5		6		TOTAL
	a	b	a	b	a	b	a	b	a	b	a	b	
MARKS	5	5					3	2					15

START WRITING FROM HERE

(i)

Role of different stakeholders in a project



Owner

- owner is the major stake holder in the project construction.
- He is the ultimate authority of the project.
- He can make any changes in the project like labour count, materials used, and machines used.
- He is the decision maker of the project.
- Whatever he says, must be followed by labourers and contractor and all the members included in the project.

User

- User is the person who is going to have the right on that project building.
- He can suggest some changes in the project according to his taste (or) choice.

Consultant

- Consultant is a specialist who performs soil investigations and ensures safety and performance of the project.
- He suggest some measure if the project is unsafe. ✓

Contractor

- Contractor must submit bills to the owner.
- contractor should take care of the labours, materials, machines.
- He should direct the labours to complete the task within specified time.
- If there are any repairs to the machines, he should look after it.
- ultimately, he should bring all the resources together to complete the project within the deadline.

Architect

Architect takes care of the aesthetic appearance of the project building. He designs and maintains the interiors and also some

extensions of the project.

Engineers

Structural Engineers

Structural Engineer analyses the loads coming on the structure and designs according for safety of the structure.
→ In future, he also maintains it for any damage or repair.

Mechanical Engineers

Mechanical Engineer deals with machines like air conditioning.
→ He looks after the ventilation of the project.
→ He ensures its safety even after completion of the project.

Electrical Engineers

Electrical Engineer deals with electrical appliances like switches, cables, wires and properly connecting them.
→ He also maintains them in the future.

5

4.a)

Activity Name	t_o	t_m (in days)	t_p	$t_e = \frac{t_o + 4t_m + t_p}{6}$
A	4	6	8	6
B	2	3	10	4
C	6	8	16	9
D	1	2	3	2
E	6	7	8	7
F	6	7	14	8
G	3	5	7	5
H	4	11	12	10
I	2	4	6	4
J	2	9	10	8

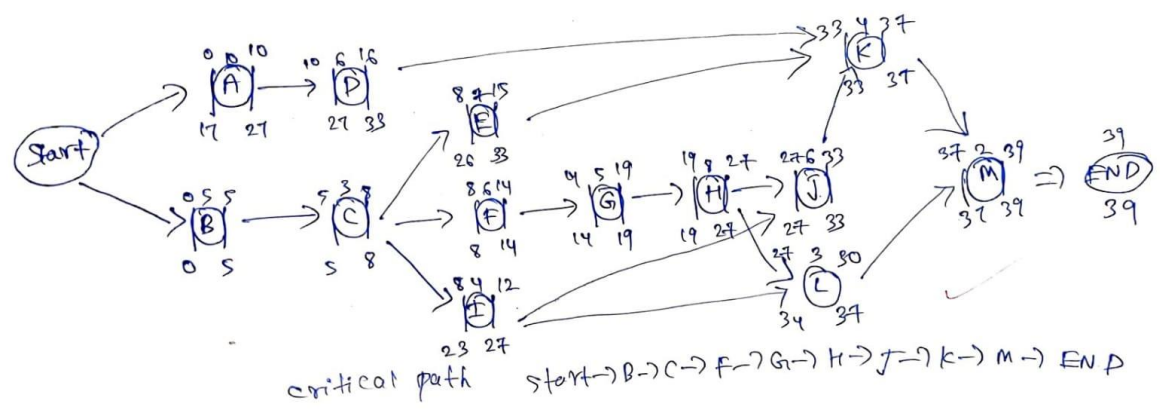
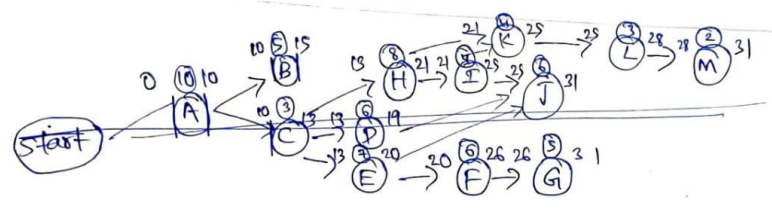
5

4.b)

$x = 25 \text{ days}$ $SD = 1.408$
 $\text{mean} = 23 \text{ days} = \mu$

$$z = \frac{x - \mu}{SD} = \frac{25 - 23}{1.408} = 1.42$$

From table, probability the project is completed in 25 days = 92.22%



Floats

Activities

Floats

F

$8-8=0$

J

$27-27=0$

M

$37-37=0$

Total float = LS - ES

project duration = 39 days





4

18241A0163
Anusha

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

IV B.TECH. I SEM., I MID-TERM EXAMINATION, October-2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Time: 10 min

Max. Marks: 5

Name: A. Anusha

Roll No. 18241A0163

I Multiple choice Questions

1. Which of the following are project scheduling techniques [D]
A) Bar charts B) Milestone charts
C) CPM and PERT D) All of the above
2. Construction of bridge comes under industrial constructions
True [] False [✓] [D]
3. Resources refers to
A) Manpower B) Machinery C) Materials D) All of the above
4. The difference between the time available to do a job and the time required to do the job, is known as [B]
A). event B). float
C). duration D). constraint.
5. Rectified model of bar chart is called [C]
A) Linked bar chart B) Vertical chart
C) Variation chart D) Revaluation chart
6. Which of the following is not a tool for scheduling? [D]
A) Critical path method B) Gantt charts C) PERT D) Log scale chart
7. PERT analysis is based on [D]
A) optimistic time B) pessimistic time
C). most likely time D) all the above.
8. CPM stands for [C]
A) Conditional program method B) Core program method
C) Critical path method D) Critical program method
9. If a is the optimistic time, b is the pessimistic time and m is most likely time of an activity, the expected time of the activity [C]
A). $a+m+b$ B). $(a+m+b)/6$
C). $(a+4m+b)/6$ D). $(b-a)/6$
10. Project crashing is applied on non critical activities
TRUE [✓] FALSE []



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I II MID TERM EXAMINATION

Handwritten signature

No.

375718

H.T. No.

1 8 2 4 1 4 0 1 6 3

Name of the Examination IV Year II Semester Mid I Exam.

Course Project management & Enterprise Branch Civil Date 18/10/21
Entrepreneurship

Signature of the Invigilator

Q.NO.	1		2		3		4		5		6		TOTAL
	a	b	a	b	a	b	a	b	a	b	a	b	
MARKS	4				1 1/2	3 1/2							9

START WRITING FROM HERE

$$t_e = \frac{t_o + 4t_m + t_p}{6}$$

t_o = estimated time.

x = 25 days.

$$\sigma^2 = \left(\frac{t_p - t_o}{6} \right)^2$$

$$Z = \frac{x - \mu}{\sigma}$$

~~probability~~

μ = mean duration

σ = standard deviation

Activity Name	To	tm	tp	te
A	4	6	8	6
B	2	3	10	4
C	6	8	16	5.67
D	1	2	3	2.67
E	6	7	8	4.33
F	6	7	14	5.33
G	3	5	7	3.67
H	4	11	12	4.67
I	2	4	6	3.33
J	2	9	10	4

3
2
1

5.67
 $\frac{6+8+16}{3}$

$$2 + \frac{4(4) + 6}{6}$$

$$= \frac{24}{6}$$

$\mu = 25$ days. $\sigma = 1.408$

$$Z = \frac{\mu - u}{\sigma} = \frac{25 - 23}{1.408} = 1.420$$

Z value from Z-chart = 92.22%
= 92.22%

i) Pre-tender Stage.

- * This is the stage before the project is tendered.
- * In pre-tender the contractor who wants to participate in tender does all the research about the project.
- * The cost of the project is estimated and profit percentage is also calculated.
- * The materials required like manpower, machinery etc are also estimated.
- * Plans are made for estimating the time period required.
- * Alternate plans are also made.

Contract Stage.

- * This stage is also known as post tender stage. This is the stage after getting contract.
- * In this stage an appropriate plan is selected from the various alternate plans.

- * All the human resources, machinery are used properly to completed the project within time.
- * All the activities going in the project should be supervised properly such that there is no delay in the project.
- * The Contractor should complete the project within the money tendered.
- * If any required additionally be need to put out of his own.
- * Need of careness is very important during scheduling the project.

3)a)

CPM	PERT
i) CPM is less accurate compared to PERT	ii) It has more accuracy.
ii) This depends the early start, early finish, late finish, late start.	This method depends Optimistic, pessimistic and most likely time.

① ~~not paper~~

iii) Critical path is determined.

No need of critical path it requires highest frequency.

iv) CPM is network based method

PERT is also network based method..

b) Free float - This is the difference between early start and late finish of the activity. where

Independent float - Independent float is difference between early finish and late finish.

Interfering float - This is the difference between early finish and late start.



3

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

IV B.TECH. I SEM., I MID-TERM EXAMINATION, October-2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Time: 10 min

Max. Marks: 5

Name: ABDUL SAHAD

Roll No. 16241A0161

I Multiple choice Questions

1. Which of the following are project scheduling techniques [D] ✓
A) Bar charts B) Milestone charts
C) CPM and PERT D) All of the above
2. Construction of bridge comes under industrial constructions
True [✓] False [] ✓ [D] ✓
3. Resources refers to [D] ✓
A) Manpower B) Machinery C) Materials D) All of the above
4. The difference between the time available to do a job and the time required to do the job, is known as [] ✓
A). event B). float [B] ✓
C). duration D). constraint.
5. Rectified model of bar chart is called _____ [A] ✓
A) Linked bar chart B) Vertical chart
C) Variation chart D) Revaluation chart
6. Which of the following is not a tool for scheduling? [C] ✓
A) Critical path method B) Gantt charts C) PERT D) Log scale chart
7. PERT analysis is based on _____ [D] ✓
A) optimistic time B) pessimistic time
C). most likely time D) all the above.
8. CPM stands for [C] ✓
A) Conditional program method B) Core program method
C) Critical path method D) Critical program method
9. If a is the optimistic time, b is the pessimistic time and m is most likely time of an activity, the expected time of the activity _____ [A] B ✓
A). $a+m+b$ B). $(a+m+b)/6$
C). $(a+4m+b)/6$ D). $(b-a)/6$
10. Project crashing is applied on non critical activities
TRUE [✓] FALSE [] ✓



Gokaraju Rangaraju Institute of Engineering & Technology
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Bachupally, Kukatpally, Hyderabad - 500090

I II **MID TERM EXAMINATION**

No. 375725 H.T. No. 16241A0161

Name of the Examination IVth B Tech MID-2

Course Project management and entrepreneurship Branch Civil Date 18/01
Signature of the Invigilator

Q.NO.	1		2		3		4		5		6		TOTAL
	a	b	a	b	a	b	a	b	a	b	a	b	
MARKS	1/2		0		0	0							1 1/2 (1.5)

START WRITING FROM HERE

1) pre-tender stage & contract stage of project planning

pre-tender stage.

→ The formation of excavations which may take place

→ There also form an formation of different stages

→ The stage which may transfer for one to another in an usual form / manner is known.

→ This plays a major role.

→ It is also formed due to different specifications.

Contract

→ pre funded stage

- It is basically formed to the project carried out in a manner.
- It is also associated with the form.
- The project planning mainly executes the formation the kind of project.
- Time taken to the project ~~X~~
- Execution of the formation which takes place
- It is also associated in a manner.
- It plays a major role.

3)
a)

CPM

PERT

- It plays a major role
- It is defined
- It plays a major role
- It is distributed.

3)

b) free, independent and interfering floats

free float

→ It is defined as the formation of the float which is been in a free manner

→ It plays a major role

→ It is also associated with the form.

independent float

→ These are defined as the floats which are been independent in manner

→ These type of floats go through their own form.

→ These are associated

→ This plays a major role

→ interfering float

→ These floats are formed due to the excavation of each other

→ When a float is been formed ~~down~~ by the thing when the other float goes through the same thing in a different manner is known as interfering float.

→ This plays a major role

→ It is also associated with the formation.

4)

Activity Name	To	km (days)	LP
A	4	6	8
B	2	3	10
C	6	8	16
D	1	2	3
E	6	7	8
F	6	7	14
G	3	5	7
H	4	11	12
I	2	4	6
J	2	9	10

25 days

~~1~~

Mean = 23

Variance = 1408



Manvitha

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

IV B.TECH. I SEM., II MID-TERM EXAMINATION, December-2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Time: 10 min

Max. Marks: 5

Name: Manvitha

Roll No. 18241A01874-48

I Multiple choice Questions

1. Which of the following bonds have alternate courses of stretchers & headers
A).Flemish
B).English bond
C).Header bond
D).Garden wall bond [A] ✓
2. For small and repetitive works _____ formwork can be used
A).Steel
B).Timber
C). Sheet
D). None of the above [B] ✓
3. Which of the following equipment is useful for bank sloping
A).Graders B).Excavators C). Cranes D). All of the above [A] ✓
4. Which of the following comes under deep foundation
A). Strip footing
B).Combined footing
C). Caisson foundation
D).Isolated footing [C] ✓
5. Which of the following comes under deep foundation ^{load bearing} _{wall}
A). Strip footing
B).Combined footing
C). Caisson foundation
D).Isolated footing [A] ✓
6. What is the maximum possible grade of concrete that can be obtained using nominal mix?
A).M30 B).M15 C).M20 D). M50 [C] ✓
7. Optimum moisture content is found based on
A).Natural water content
B).Maximum dry density
C). Maximum bulk density
D).None the above [B] ✓
8. Which type of compactor is suitable for cohesive soft soil
A) Pneumatic wheel roller
B) Single drum roller
C) Sheep foot roller
D) Plate compactor [C] ✓
9. The initial investment in any business or entrepreneurship is
A). Capital
B).Interest amount
C).Returns
D).All of the above [A] ✓
10. Social entrepreneurship is done in the direct view of
A).Corporate benefit
B).Profit
C).Social cause
D). Publicity [C] ✓



I II **MID TERM EXAMINATION**

Manvitha

No.

395350

H.T. No.

18241A0187

Name of the Examination IV Btech Isem Mid II Examination

Course Project Management and Entrepreneurship Branch Civil Engineering Date 9/12/2021

Signature of the Invigilator

Q.NO.	1		2		3		4		5		6		TOTAL
	a	b	a	b	a	b	a	b	a	b	a	b	
MARKS	2	3			5		2.5	2.5					15

START WRITING FROM HERE

③

Nominal mix

- 1) Nominal mix is the mix based on standard proportions like M20 (1:1.5:3), M15 (1:2:4)
- 2) It is applicable till M20 concrete only
- 3) It is not so accurate
- 4) Material gets wasted sometimes in nominal mix
- 5) Less performance mix

Design mix

- 1) Design mix is the mix based on the IS code recommendations.
- 2) It is applicable for grade above M20 also
- 3) It is accurate
- 4) Material is properly used to get a economical mix
- 5) High performance mix and higher strength is obtained.

6) No Analysis is required for deciding mix proportions.

7) At initial stage, there is no wastage of material.

8) No qualification is required for understanding and analysing nominal mix.

9) The labourers can easily work with nominal mix.

10) No special concrete can be prepared from this mix.

11) No modifications can be made in nominal mix.

12) Maintenance cost is high.

6) Analysis is required for deciding design mix.

7) Material gets wasted as we perform trials at initial stage.

8) Skill is required to prepare design mix and execute it.

9) The labourers face difficulty in understanding the design mix.

10) Fiber reinforced concrete, pumpable concrete etc. can be prepared from Design mix.

11) In adverse climatic conditions, modifications are made to concrete according in design mix.

12) Maintenance cost is low.

4. a)

Good entrepreneurship

A good entrepreneur must have following qualities :-

Know your product :- we should know our product position in the market and always strive for its improvement.

Flexibility :- The entrepreneur must be flexible enough to adapt to the changes of the business condition.

Innovation :- Entrepreneur must have an idea which he should develop so that he can execute it in the right manner to get profits.

Future prediction :- Entrepreneur should be able to predict the future position of the product and build ideas to ~~for~~ make it stay in the market.

Monitor :- Entrepreneur must monitor his product whether it is doing good in the market or not and perform any changes accordingly.

Knowledge of the market :- Entrepreneur must be aware of the changes in the market shares and holdings of

his competitive products and check with his product to make any improvements.

RISK :- There may be times when our product may be in losses or there is a reduction of value of our product then we must have an alternative plan to boost up.

Investment :- We must ~~not~~ choose right persons to invest in our business whom we can trust and not allow our business to someone without knowing about them completely.

Raise Funds :- In the crisis time (or) austerity, the entrepreneur must be able to raise the funds to his product.

Good Communication Skill :- Entrepreneur should utilise his opportunities correctly.

Entrepreneur must have good communication with his staff and able to maintain good relationship with them.

Maintain values :-

Entrepreneur must give priority to values rather than profit. Then only more customers will be ready to buy his product.

Building up Plan and Control :-

Entrepreneur must build a plan to maintain in the market.



Robit

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

IV B.TECH. I SEM., II MID-TERM EXAMINATION, December-2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Time: 10 min

Max. Marks: 5

Name: B. Robith

Roll No. 18241A0107

I Multiple choice Questions

- Which of the following bonds have alternate courses of stretchers & headers
A).Flemish B) English bond [A]
C).Header bond D).Garden wall bond
- For small and repetitive works _____ formwork can be used [C]
A).Steel B).Timber
C). Sheet D). None of the above
- Which of the following equipment is useful for bank sloping [D]
A).Graders B).Excavators C). Cranes D). All of the above
- Which of the following comes under deep foundation [C]
A). Strip footing B).Combined footing
C). Caisson foundation D).Isolated footing
- Which of the following comes under deep foundation [C]
A). Strip footing B).Combined footing
C). Caisson foundation D).Isolated footing
- What is the maximum possible grade of concrete that can be obtained using nominal mix? [C]
A).M30 B) .M15 C) .M20 D). M50
- Optimum moisture content is found based on [C]
A).Natural water content B).Maximum dry density
C). Maximum bulk density D).None the above
- Which type of compactor is suitable for cohesive soft soil [C]
A) Pneumatic wheel roller B) Single drum roller
C) Sheep foot roller D) Plate compactor
- The initial investment in any business or entrepreneurship is [A]
A). Capital B).Interest amount
C).Returns D).All of the above
- Social entrepreneurship is done in the direct view of [C]
A).Corporate benefit B).Profit
C) .Social cause D). Publicity

and he should constantly look after it.

Endorsement :- Entrepreneurs should properly endorse the product so that more people can come to know about the product.

Example :- In covid times, many companies had to be shut down but some companies made an alternative plan and they invested in other businesses which are to be flourished like medicine, sanitizers etc. They made the use of opportunity properly and some companies paid the employees salaries without firing them thereby maintaining values.

4(b)

Business

1) Business is the operation of already existing product/service.

2) Business has low risk.

3) Business can get funds easily.

Entrepreneurship

1) Entrepreneurship means creating a new idea and solution for ~~new~~ problems existing.

2) Entrepreneurship has high risk.

3) Entrepreneurs should work hard to find funding for their product.

stripping of formwork

stripping of formwork is the removal of formwork after the concrete has cured.

→ It has to be properly removed after sufficient curing occurred and concrete gained its strength.

→ Other formwork should not be disturbed while removing the formwork

Formwork

Time

Beams, columns

2 days for engineering purposes

Beam soffits

5 days

Slab soffits

3 days

Slab cover props

7 days

Spanning upto 4.5m

14 days

Spanning above 4.5m

stripping depends upon

1) Ratio of concrete mix \div High strength

Concrete mix gain strength fastly. so, the formwork must be removed fastly.

2) climatic conditions \div under hot climatic

4) Business is generally a profitable organisation.

5) Many members are involved in the business for its establishment.

6) ~~the~~ Business is supported by the society and has some certainty.

7) There will be little growth in business as it is already existing thing compared to entrepreneurship.

8) Business constitutes entrepreneurship but Business is regular thing having no new idea.

4) Entrepreneurship can also be for a social cause.

5) They are many entrepreneurs who solely started their new business - i.e., a new idea implementation.

6) Entrepreneurship is uncertain and at the initial stages there will very less support from the society.

7) Entrepreneurship having a very ~~creating~~ creative idea then it can get large profits to the company at early stages itself.

8) It is a type of business with new idea and correct implementation.

The parts of a dozer are:-

- 1) steel track shoes
- 2) Towing hook
- 3) Diesel Engine
- 4) Fuel tank
- 5) Removable projective cab
- 6) Mould blade
- 7) Exhaust pipe

They are of two types:-

Crawler type

- Having speed 5-10 km/h
- It has a ground pressure distribution of 6-8 psu
- It has high coefficient of traction - 0.9

wheel type

- It has a speed of 20-40 km/h
- It has a ground pressure distribution of 15-20 psu
- It has coefficient of traction - 0.7

stripping of formwork

stripping of formwork is the removal of formwork after the concrete has cured.

→ It has to be properly removed after sufficient curing occurred and concrete gained its strength.

→ Other formwork should not be disturbed while removing the formwork

Formwork

Time

Beams, columns

2 days for engineering purposes

Beam soffits

5 days

Slab soffits

3 days

Slab cover props

7 days

Spanning upto 4.5m

14 days

Spanning above 4.5m

stripping depends upon

1) Ratio of concrete mix :- High strength

Concrete mix gain strength fastly. so, the formwork must be removed fastly.

2) climatic conditions :- under hot climatic

Conditions, Curing will be done faster. so, formwork has to be removed fastly

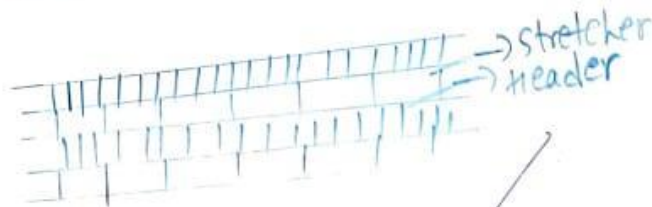
- 3) Type of concrete - RHC gains strength faster
(Rapid hardening concrete)
So remove formwork fastly

1. (b)

BRICK bonds

1. Flemish bond

- The arrangement of alternate layers of header and stretcher bricks is called Flemish bond with header centered on a stretcher.
- The Flemish bond on two sides is called Double Flemish bond.



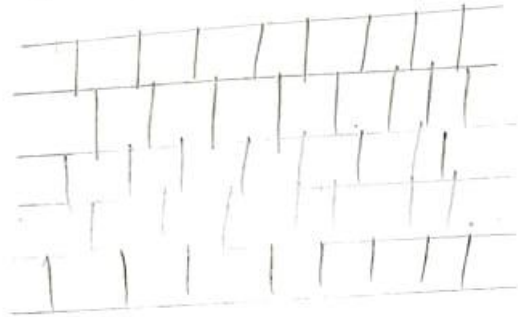
2. English bond

- The arrangement of stretcher and headers alternatively in a single layer is called English bond.



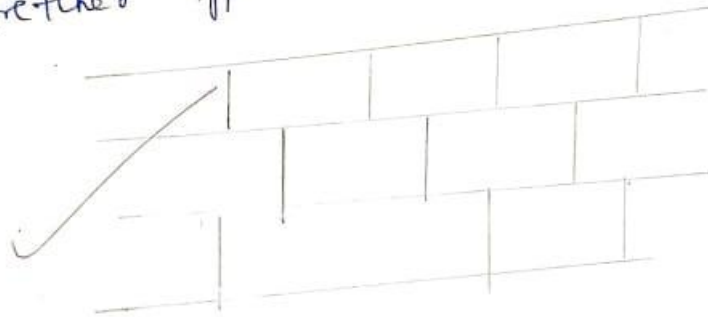
3. Header bond

The entire wall is arranged with header type of bricks only.



4. Stretcher bond

The entire wall is arranged with stretcher type of bricks only.



3

5. Granden bond

Three layers of stretcher bond are placed between header layers.





Robit

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

IV B.TECH. I SEM., II MID-TERM EXAMINATION, December-2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Time: 10 min

Max. Marks: 5

Name: *B. Rohith*

Roll No. *18241AD107*

I Multiple choice Questions

1. Which of the following bonds have alternate courses of stretchers & headers
A).Flemish
B) English bond
C).Header bond
D).Garden wall bond [*A*] ✓
2. For small and repetitive works _____ formwork can be used
A).Steel
B) .Timber
C) . Sheet
D) . None of the above [*C*] ✓
3. Which of the following equipment is useful for bank sloping
A).Graders B) .Excavators C) .Cranes D) . All of the above [*D*] ✓
4. Which of the following comes under deep foundation
A) . Strip footing
B) .Combined footing
C) . Caisson foundation
D) .Isolated footing [*C*] ✓
5. Which of the following comes under deep foundation
A) . Strip footing
B) .Combined footing
C) . Caisson foundation
D) .Isolated footing [*C*] ✓
6. What is the maximum possible grade of concrete that can be obtained using nominal mix?
A) .M30 B) .M15 C) .M20 D) . M50 [*C*] ✓
7. Optimum moisture content is found based on
A) .Natural water content
B) .Maximum dry density
C) . Maximum bulk density
D) .None the above [*C*] ✓
8. Which type of compactor is suitable for cohesive soft soil
A) Pneumatic wheel roller
B) Single drum roller
C) Sheep foot roller
D) Plate compactor [*C*] ✓
9. The initial investment in any business or entrepreneurship is
A) . Capital
B) .Interest amount
C) .Returns
D) .All of the above [*A*] ✓
10. Social entrepreneurship is done in the direct view of [*C*] ✓
A) .Corporate benefit
B) .Profit
C) .Social cause
D) . Publicity



Gokaraju Rangaraju Institute of Engineering & Technology
(Autonomous College Affiliated to JNTUH) (12 Pages)
Bachupally, Kukatpally, Hyderabad - 500090

I II **MID TERM EXAMINATION**

No.

394966

H.T. No.

1 8 2 4 1 A 0 1 0 7

Name of the Examination Project Management and Entrepreneurship

Course B.Tech Branch CIVIL Date 13/12/2021

Signature of the Invigilator

Q.NO.	1		2		3		4		5		6		TOTAL
	a	b	a	b	a	b	a	b	a	b	a	b	
MARKS	5		5		3.5		2	2.5					13

START WRITING FROM HERE

3]

Excavator:-

Excavators are generally useful for excavating soil from earth before construction for foundation.

- They are capable of going deeper and deeper and able to excavate the material by layers.

- Components of Excavators:-

① Bucket

② Boom

③ Cab

④ Engine

⑤ Hydraulic cylinder

⑥ Counter weight

⑦ Arm

⑧ Track frame.

4)
b)

Business

- * Relatively low profits
- * It is the Administration of business
- * Smaller the risks in Business
- * profitable for only Administrator.
- * Very high Competition 2-5
- * It is calculative in nature
- * Include only limited people

Entrepreneurship

- * Relatively high profits
- * It is the idea of business.
- * Taking high risks in Entrepreneurship.
- * profitable for people include in this.
- * Very low Competition.
- * It is innovative.
- * Include Group of people or Companies.

2a) For Good Entrepreneurship there should be a good Entrepreneur

Good Entrepreneurship includes following factor 1.

- Should have good leadership skills
- should possess Risk taking nature 2
- Having discipline.

4)
b)

Business

- * Relatively low profits
- * It is the Administration of business
- * Smaller the risks in Business
- * profitable for only Administrator.
- * Very high Competition 2-5
- * It is calculative in nature
- * Include only limited people

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- * Include Group of people or Companies.

2a) For Good Entrepreneurship there should be a good Entrepreneur

Good Entrepreneurship includes following factor 1.

- Should have good leadership skills
- should possess Risk taking nature 2
- Having discipline.

- Should include innovative ideas for development.
- Should promote creativity.
- Should be Competitive and possess healthy atmosphere.
- Should follow work Ethics.
- Should be in Government guidelines about idea.
- The idea should develop no. of people and also should be Environment friendly.
- Should include durability and creativity in the work.
- Should possess skills and knowledge about the work.

3]

Nominal Mix

- * There are relatively less properties
- * Used for Small or Normal Construction
- * Mix Calculation on dry volume.

Water Cement Ratio is not fixed.
 * Less design life.

Design mix.

- * Relatively more properties
- * Useful for heavy Construction.
- * Calculation of mix on masses
- * Water Cement Ratio is fixed
- * More design life.



GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

IV B.TECH. I SEM., II MID-TERM EXAMINATION, December-2021

PROJECT MANAGEMENT AND ENTREPRENEURSHIP (GR18A4002)

Time: 10 min

Max. Marks: 5

Name: _____

Roll No. _____

ch. suif

2.5

I Multiple choice Questions

1. Quality norms in construction are as per
A).IS 9000 B) IS 90 [B] ✓
C) IS 875 D). IS 800
2. For small and repetitive works _____ formwork can be used [B] ✓
A).Steel B) .Timber
C). Sheet D). None of the above
3. Which of the following equipment is useful for bank sloping [D] ✗
A).Graders B) .Excavators C). Cranes D). All of the above
4. Which of the following comes under deep foundation [A] ✓
A). Strip footing B).Combined footing
C). Caisson foundation D).Isolated footing
5. Which of the following comes under load bearing wall [C] ✓
A). Strip footing B).Combined footing
C). Caisson foundation D).Isolated footing
6. What is the maximum possible grade of concrete that can be obtained using nominal mix? [C] ✓
A).M30 B) .M15 C) .M20 D). M50
7. Optimum moisture content is found based on [B] ✓
A).Natural water content B).Maximum dry density
C). Maximum bulk density D).None the above
8. Which type of compactor is suitable for cohesive soft soil [C] ✓
A) Pneumatic wheel roller B) Single drum roller
C) Sheep foot roller D) Plate compactor
9. The initial investment in any business or entrepreneurship is [D] ✓
A). Capital B).Interest amount
C).Returns D).All of the above
10. Social entrepreneurship is done in the direct view of [C] ✓
A).Corporate benefit B) .Profit
C) .Social cause D). Publicity



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I II MID TERM EXAMINATION

No. **393937**

H.T. No.

1	9	2	4	5	A	0	1	0	7
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Name of the Examination PROJECT MANAGEMENT AND ENTREPRENEURSHIP

Course B.Tech IV Year Branch Civil Date 09-12-2021

Signature of the Invigilator

Q.NO.	1		2		3		4		5		6		TOTAL
	a	b	a	b	a	b	a	b	a	b	a	b	
MARKS	5				2								7

START WRITING FROM HERE

③

Nominal Mix

Design Mix

- It is a volume batching
- up to M20 grade comes under generally nominal mix
- IS 456-2000 code is used
- code gives direct standard values based on grade of concrete up to M20
- It gives less strength
- used in RCC

- It is a weighted batching.
- Generally more than M20 grade comes under design mix.
- IS 1790 code is used.
- we will design based on the requirements.
- It gives more strength.
- used in PSC

Exami

B.1 ① pre cast construction.

- NO. _____
- RKS _____
- Before casting any member Generally we are arranged some scaff form work.
 - After Arranging form work only we built the member.

Q1

- In the pre cast construction materials is not prepared at site.
- Materials prepared at lab. because of less space available in field base on situations. members prepared at lab.

Q2

- In the pre cast structures Generally High grade mix used. It gives high strength compared to normal mix condition.

- In the lab whatever arrangement required in the site they are arranged in the lab.

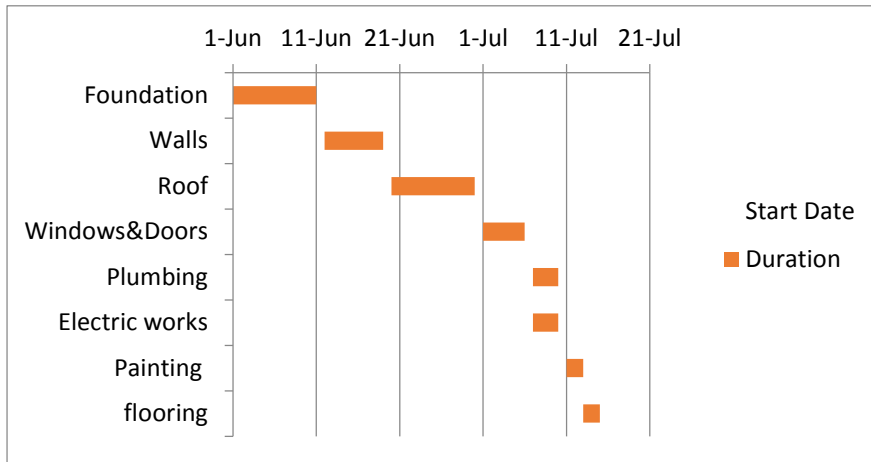
- In this also pre tensioning and post tensioning are there for preparing pre stress members.

- Adopting one method preparing the member and transport into the site by using cranes.

- In this less factor of safety used compared to field.

K-NIKITHA

ASSIGNMENT-1



Project Management and

Entrepreneurship

Unit-II

Assignment - 2

M. Naveena

18241AD136

CH1 - IV - (A)

1)
a) What are Direct and Indirect costs.

Direct costs :-

Direct costs are those costs that are directly tied to the cost of an activity and can usually be measured with reasonable accuracy.

Examples of direct costs include fixed labor, materials, and equipment. They are typically one-off costs that come from a single department or the project itself.

Indirect costs :-

Indirect costs are the costs of doing business but are not directly traceable to a specific activity.

Examples of indirect costs include utilities and quality control. Incurred by the organization at large, indirect costs occur at the same time as the project, but are not necessarily caused by it.

1)
b) What are the Demerits of PERT.

Various Demerits of PERT are mentioned below:

1) Time Focused Method - PERT is a time-bound method, so finishing projects or activities on time is of high importance. If it does not happen then a problem can arise.

2) Subjective Analysis - Here, the project activities are recognized according to the available data. However, it is difficult in PERT projects as it is applicable for the only new project are which is not repetitive in nature, therefore, the collection of information to be subjective in nature.

3) prediction Inaccuracy - PERT does not have any past records for a framework of a project, so prediction comes into play. The project will be ruined if the prediction is not accurate.

4) Expensive - Too expensive in terms of time consumed, research, prediction, and resources utilized.

5) Other Issues with PERT - This method is highly labor-intensive in nature. As there are chances of an increase in project activities large and complicated networks are developed as many task dependencies come into existence. If two activities share common resources, this technique won't find very apt for the project.

* Too much emphasis on the critical path :-
- A keen focus on the critical path, is vital for projects to stay on schedule. Labor-intensive, by nature :-
- Creating a PERT chart that makes sense for everyone takes time, planning, resources, and skill.

2) Mention the procedure followed in project crashing.

project crashing

procedure for crashing

Step-1) Draw the network diagram and mark the Normal time and crash time.

Step-2) Calculate TE and TL for all the activities.

TE = earliest event occurrence time
TL = latest allowable event occurrence time
ES = earliest activity start-time.

Step-3) Find the critical path and other paths.

Step-4) Find the slope for all activities and rank them in ascending order.

Step-5) Establish a tabular column with required field.

Step-6) Select the lowest ranked activity; check whether it is a critical activity. If so, crash the activity, else go to the next highest ranked activity.

Note: The critical path must remain critical while crashing.

Step-7) Calculate the total cost of project for each crashing.

Step-8) Repeat step-6 until all the activities in the critical path are fully crashed.

PME

① Write about quality control and quality assurance.

① Quality Control:-

According to Indian Standard of Organization, quality control is defined as set of activities or techniques whose purpose is to assure that all quality requirements are met.

Quality control describes the sequence of actions which provide a means to control and measure the characteristics of an item, process or facility against the established requirements.

In the context construction, quality control is administered by the contractor/consultant through engineers and testing laboratories. Objective of quality control is to provide safe, reliable and durable structure.

Quality control is achieved by means of

- 1) Inspection
- 2) Testing
- 3) Sampling

Quality Assurance:-

→ According to Indian Standard Organization, quality assurance is defined as the set of activities which demonstrates the desired quality of standard is obtained.

→ Quality assurance activities include all those planned and systematic administrative and surveillance functions initiated by the project owner and regulatory agents.

Quality assurance programmes encompass the following:-

- Establishing the procedure for defining, developing and establishing quality standards in design, construction and sometimes the operational stages of structure and its components.
- Establishing the procedure to be used to monitor, test, inspect, measure and perform current and review activities to assure compliance with established quality standards with regard to construction materials and personnel.
- Defining the administrative procedure and requirements, organizational and responsibilities, communications, and information patterns, and other management activities required to execute, document and assure attainment of established quality standards.

② Mention and describe different formwork used in construction and stripping of formwork.

Ans) Formwork are mainly of 2 types

- steel formwork
- wooden formwork

steel formwork is made of-

- steel sheets
- Angle Iron
- Tee Iron

wooden formwork consists of

- props
- planks battens
- Ledgers
- Sheeting.

Removal of formwork:-

Time of formwork removal mainly depends on the following factors

1) Type of cement: Rapid hardening cements require lesser time as compared to OPC (Ordinary Portland Cement)

2) Ratio of concrete mix: Rich ratio concrete gain strength earlier as compared to weak ratio concrete

3) Weather condition:-

1) Hydration process accelerates in hot weather conditions as compared to cold and humid weather conditions.

③ Explain non-destructive testing on concrete.

Ans) * Surface hardness test:- These are of indentation type, include the Williams testing pistol and impact hammers, and are used only for estimation of concrete strength.

* Rebound hammer Test:- It measures the elastic rebound of concrete and is primarily used for estimation of concrete strength and for comparative investigation.

* Penetration and Pullout Techniques:- These include the use of the Simbi hammer, spit pins, the Windsor probe and the pullout test. These measure the penetration and pullout resistance of concrete and are used for strength estimation, but they can also be used for comparative studies.

* Dynamic or Vibration tests:- These include resonant frequency and mechanical sonic and ultrasonic pulse velocity methods. These are used to evaluate durability and uniformity of concrete and to estimate its strength and elastic properties.

* Combined methods :- It involves ultrasonic pulse velocity

hammer have been used to estimate strength of concrete.

* Radioactive and Nuclear methods :- These include X-ray penetration tests for measurement of density and moisture content of concrete. Also, neutron scattering and neutron activation analysis are used for moisture and cement content determination.

* Magnetic and Electrical methods :- The magnetic methods are concerned with determining cover of reinforcement bars, whereas the electrical methods, including microwave and dielectric techniques, have been used to measure moisture content and thickness of concrete.

* Acoustic Emission Techniques :-

These have been used to study the initiation and growth of cracks in concrete.

① Front end loaders:

- * It is heavy engineering equipment that is used to pickup and drop the load like construction debris, aggregates, stones into another big equipment, truck or into excavation pit.
- * The front-end loader is used to pick up and move large quantities of dirt, sand and other materials quickly and efficiently from one location to another.
- * The most common use of a front-end loader is to move materials off the ground into a container at higher level of elevation, such as truck.
- * The loader's hydraulic system provides the control necessary for operating the attachments.
- * They can be mounted either on wheels or tracks, wheels provide better mobility but on field loaders with tracks have much stability and traction.
- * General, multi-purpose and rock buckets are used

⇒ Earth Moving Tippers:

- * It is an earth moving equipment which is truck whose rear/back platform can be raised by raising the front portion so as to dump the material inside by using gravity as basis.

- * Tippers are suitable for carrying heavy loads on rough surface in construction and infrastructure as well as in quarrying and mining operations also.
- * They have low operating cost, long endurance and high performance.
- * They are similar to dump trucks in function but dump trucks are heavy duty and are used in mining and other operations.

→ Dozers :

- * Dozers are powerful diesel based equipment that have front mounted blade.
- * They are used to move debris, stone and even capable of removing trees etc.
- * Dozers are classified and rated based on power and size.
- * It is used for clearing, Drifting, Back felling, moving material, Ditching, spreading.
- * Dozers are used for dozing (pushing materials)
- * It is a tractor power point.
- * It has a blade attached in front
- * 2 types of dozers
- * Crawler mounted dozer and wheel mounted dozer

② Rollers

- * Soil compaction is needed in order to reduce settlement overtime.
- * To increase the bearing capacity.
- * In order to reduce differential settlement failures.

Different types of rollers: and Usage:

- 1) Smooth wheeled rollers
- 2) Pneumatic roller
- 3) Sheep foot roller
- 4) Vibratory rollers

1) * Smooth wheeled rollers are suitable for sand, gravel and crushed stone.

* They have smooth metal drum in front and wheels on the rear axle.

* They give 100% coverage efficiency.

* They are much suitable for crushed action is required.

2) Pneumatic roller is a massive wagon with closely spaced wheels.

* Amount of pressure depends on area of contact and number of wheels.

* Give 80% coverage efficiency.

* Used for compacting cold laid bituminous pavements.

2) sheep foot roller consists of drum with multiple foot or lugs.

- * Coverage efficiency is 8% - 12%.
- * The amount of compaction depends on no. of foot, area of each foot, gross weight of the roller.
- * Not much effective on sandy soils.

3) Vibratory rollers is fitted with 1 or 2 smooth surfaced steel wheels.

- * Vibrations are generated by the rotation of an eccentric shaft inside.
- * Used for compacting granular base courses.
- * Sometimes used for asphaltic concrete work.

③ The Insitu methods of measuring soil density:

i) Core Cutter Method.

The dry density is obtained as,

$$\rho = \frac{\gamma}{1+w} = \frac{(M/V)}{1+w}$$

M = Mass

V = internal volume

w = water content.

ii) Sand Replacement method:

a) Calibration of sand density.

b) Measurement of volume of the hole.

118) Nuclear density gauge:

A moisture density gauge indicates whether a foundation is suitable for constructing a building or roadway.

119) Design Mix Concrete:

- * In this method, the procedure and rules given in the Mix design codebook are used to design and calculate the quantities of materials needed to prepare different types of concrete.
- * Design mix ratios are weight ratios.

Advantages:

- * Cost effective.
- * Required ratios of each component
- * Quality concrete mix
- * Economical concrete mix
- * Uses of locally available ingredients
- * Desired properties of mix.
- * More accurate

Disadvantages:

- * Requires high initial cost
- * Requires skilled labour
- * Requires specific attention.

Assignment-5

* Explain the importance of entrepreneurship.

Ans) Entrepreneurship is important for a number of reasons, from promoting social change to driving innovation. Entrepreneurs are frequently thought of as national assets to be cultivated, motivated, and remunerated to the greatest possible extent. In fact, some of the most developed nations such as the United States are world leaders, due to their forward-thinking innovation, research and entrepreneurial individuals.

Entrepreneurship fosters innovation and renders service in employing youth and willing individuals. Entrepreneurs also lay path for many more entrepreneurs and hence the cycle keeps maintained.

* Explain risks involved in entrepreneurship.

Ans) Financial Risk:- An entrepreneur will need funds to launch a business either in the form of loans from investors, their own savings, or funds from family. The founder will have to put their own "skin in the game". Any new business should have a financial plan within the overall business plan showing income projections, how much cash will be required to break even, and the expected return for investors in the first five-year timeframe. Failure to accurately plan could mean that the entrepreneur risks bankruptcy, and investors get nothing.

Strategic risk:- An impressive business plan will appeal to investors. However, we live in dynamic and fast paced world where strategies can become outdated quickly. Changes in the market or the business

environment can mean that a chosen strategy is the wrong one, and a company might struggle to reach its benchmarks and key performance indicators

Technology Risk:- New technologies are constantly emerging, particularly in the area of the Fourth Industrial Revolution. Some of these changes are characterised as "paradigm shifts" or "disruptive" technologies. To be competitive, a new company may have to invest heavily in new systems and processes; which could drastically affect the bottom line.

Market Risk:- Many factors can affect the market for a product or service. The ups and downs of the economy and new market trends pose a risk to new businesses, and a certain product might be popular one year but not the next. For example, if the economy slumps, people are less inclined to buy luxury or nonessentials. If a competitor launches similar product at lower price, competitor might steal market share. Entrepreneurs should perform a market analysis which assesses market factors, the demand for a product or service, and customer behavior.

Competitive Risk:- An entrepreneur should always be aware of its competitors. If there are no competitors at all, this could indicate that there is no demand for a product. If there are few larger competitors, the market might be saturated, or the company might struggle to compete. Additionally, entrepreneurs with new ideas and innovations should protect intellectual property by seeking patents to protect themselves from competitors.

* write brief note on social entrepreneurship and challenges involved in it.

Ans) Social entrepreneurship is all about recognising the social problems & achieving a social change by employing entrepreneurial principles, processes and operations. It is all about making a research to completely define a particular social problem and then organizing, creating & managing a social venture to attain the desired change. The change may or may not include a thorough elimination of a social problem. It may be a lifetime process focussing on the improvement of existing circumstances.

While a general and common business entrepreneurship means taking a lead to open up a new business or diversifying the existing business, social entrepreneurship mainly focusses on creating social impact without measuring the performance in profit or return in monetary terms. The entrepreneurs in this field are associated with non-profit sectors and organisations. But this does not eliminate the need of making profit. After all entrepreneurs need capital to carry on with the process and bring a positive change in the society.

Along with social problems, social entrepreneurship also focusses on environmental problems. Child Rights foundations, plants for waste products treatment and women empowerment foundation are few examples of social ventures. Social entrepreneurs can be those individuals who are associated with non-profit and non government organisations which raise funds through community events and activities.

Challenges of Social Entrepreneurship:-

1) Raising funds in times of austerity

This key element as during the time of covid, we have seen how it was difficult for individual people.

2) Building and following up your own business plan:
Constant monitoring of progress should be there.

3) Investing the right people.

The right people are to be involved as trust and growth should go hand in hand.

4) Process management and planning for growth

The future steps should be planned and there should be keen focus for all aspects.

5) Maintaining values:-

The social benefit is most important for this type of entrepreneurship and should be maintained as it progresses. Profit should not be prioritized over values anytime.

