BUILDING MATERIALS AND CONSTRUCTION PLANNING

(GR20A2009)

II-B.Tech – I Semester

(AY 2021-22)

Mrs I.Chandana

Assistant Professor

Department of Civil Engineering

Gokaraju Rangaraju Institute of Engineering and Technology

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

Course File Check List

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Gokaraju Rangaraju Institute of Engineering and Technology

Department of Civil Engineering

BUILDING MATERIALS AND CONSTRUCTION PLANNING

Course Code: GR20A2009 **L:2 T:1 P:0 C:3**

II Year. I Semester

Unit-I

Building Stones, Bricks, Tiles: Stone- Building stones, classification of building stones, quarrying procedures, structural Requirement, dressing, and tools for dressing of stones. BRICKS-Composition of brick earth, manufacturing of brick, structural requirements, field and lab test. TILES - Types of tiles, manufacturing of tiles, structural requirements of tiles.

Unit-II

Cement, Lime, Admixtures: Ingredients of cement, manufacturing of cement, field and lab tests. ADMIXTURES - Mineral admixtures, chemical admixtures. LIME-Various ingredients of lime, constituents of limestone and classification of lime, manufacturing of lime.

Unit-III

WOOD, GLASS, PAINTS: WOOD-Structure, types of wood, properties of wood, seasoning, defects, alternative material for wood. GLASS-Types of glasses, manufacturing of glass. PAINTS-Constituents of paints, types of paints. BUILDING COMPONENTS-Lintel, arches, staircase, floors, roofs, foundation, dcp. JOINARYS-Doors, windows, materials and types.

Unit-IV

Masonry and Finishing, Form Works: BRICK MASONRY- Types, bonds. STONE MASONRY- Types, composite masonry, concrete reinforced bricks, and glass reinforced brick. FINISHING SLOPE- plastering, pointing, and cladding- Types of ACP (Aluminum composite panel). FORM WORKS - requirements, standards, Scaffolding, shoring, under pinning.

Unit-V

Building Services and Building Planning: BUILDING SERVICES- Plumbing services, water distribution, sanitary lines and fittings, ventilators, functional requirements, systems of ventilators, air conditioning essentials and types, acoustics. CHARACTERISTICS- Absorption, fire protections, fire hazards, classification of fire resistance materials and construction. BUILDING PLANNING - Principles of building planning, classification of building and building by-laws.

TEXT BOOKS

1. SK Duggal, Building Materials, New Age Publications 4th Edition, April, 2014.

2. B C Punmia, Ashok Kumar Jain and Arun Kumar Jain, Building Construction, Laxmi Publications (P) Ltd., New Delhi, 10th Edition, 2013.

REFERENCES

1. Roy Chudley "Construction Technology" Vol. – 1 & 2,2nd Edition, Longman, UK, 1987.
2. P C Varghese, Building Construction, Prentice Hall of India Private Ltd., New Delhi,2nd Edition, 2007.

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GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

Time Table

II YEAR I Sem **AY: 2021-22**

	1	2	3	4	5	6	7
Monday	BMCP 8:50 – 9.40						
Tuesday							
Wednesday		BMCP 9:40 – 11.20					
Thursday							
Friday							
Saturday			BMCP: 10:30- 11.20				

Signature of HOD Signature of faculty

Date: Date:

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

Program 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.

Program 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.

Program Specific Outcomes

PSO 1:Recognize the need for a sustainable environment and design smart infrastructure considering the global challenges.

PSO 2:Create and develop innovative designs with new era materials through research and development.

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COURSE OBJECTIVES

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Chandana Dept.: Civil Engineering

Designation: Assistant Professor

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

S.No	Objectives
1	Identify various building materials and their structural requirements.
2	Explain the significance of cement and lime in construction.
3	Identify the suitable material for construction and various building components.
4	Review different types of masonry construction.
5	Discuss about various building services and planning and their characteristics.

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COURSE OUTCOMES

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Chandana Dept.: Civil Engineering

Designation: Assistant Professor

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

S.No	Outcomes
1	Distinguish between various types of building stones, bricks and tiles and their structural requirements.
2	Recognize the need and process of manufacture of cement and lime.
3	Identify function of various materials like wood, glass, paints and building components.
4	Find the importance of masonry, finishing and form woks.
5	Assess various building services and principles of building planning.

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BUILDING MATERIALS AND CONSTRUCTION PLANNING

STUDENTS LIST

S.No	Reg No	Student Name
1	20241A0101	AADHI SRIKAR RAO
2	20241A0102	ABHIRAM SAI YADAV JANGITI
3	20241A0103	BACCHUGUDAM RITHVIK REDDY
4	20241A0104	BANDLA NAVEEN
5	20241A0105	B.PRANAV SAI
6	20241A0106	BHATTU SUPREETH CHAKRAVARTHY
7	20241A0107	BHUPATHIRAJU HIMANTHAVARMA
8	20241A0108	BOINI HEMANTH
9	20241A0109	CHALLA AJAY KUMAR
10	20241A0110	DONABOINA SRI HARI
11	20241A0111	EPPA ARNAV
12	20241A0112	G L N RAGHURAMAN
13	20241A0113	GANDLA HARSHITH KUMAR
14	20241A0114	GUGGILLA SHASHANK
15	20241A0115	GUNDA SRIKANTH
16	20241A0116	JANGILI SRAVAN KUMAR
17	20241A0117	JANJIRALA SRUTHI
18	20241A0118	JARAPULA JAYANTH
19	20241A0119	K NIKHITHA
20	20241A0120	K SANJEEV KUMAR
21	20241A0121	K.KONDAL
22	20241A0122	KAMMAMPATI UDAYKIRAN
23	20241A0123	KARNE SRITHAN
24	20241A0124	KUNCHALA VARUN KUMAR
25	20241A0125	KUNTA NITHIN REDDY
26	20241A0126	M PAVAN KALYAN
27	20241A0127	MERE MAHESH
28	20241A0128	MOHAMMED AHMED
29	20241A0129	MOTHUKURI LAXMAN
30	20241A0130	MOTTADI ADITYA TEJA
31	20241A0131	MULA SUSHMA SRI
32	20241A0132	NAYINI SWETHA
33	20241A0133	PAIDIPALLY BHARATH

34	20241A0134	P.SAI KIRAN REDDY
35	20241A0135	PASNOOR PAVAN PRATHAP REDDY
36	20241A0136	PATHLAVATH SHIVA NAYAK
37	20241A0137	PEDDIBOINA ANUSHA
38	20241A0138	POREDDY ABHINAV REDDY
39	20241A0139	PULLAGURA SANTHOSH
40	20241A0140	RACHALA BHARATH
41	20241A0141	RADHARAPU SHAJI KUMAR
42	20241A0142	RAMAVATH ROJA
43	20241A0143	RATHLAVATH SAIRAM NAYAK
44	20241A0144	RAVI TEJA PASUNUTHI
45	20241A0146	SADDI SHRIANK REDDY
46	20241A0147	SATHVIKA NARLA
47	20241A0148	SOKKULA KOUSHIKREDDY
48	20241A0149	SRIRAM PANDAVULA
49	20241A0150	T.BHARGAVI
50	20241A0151	T.BHUVANESHWARI
51	20241A0152	S.TEJA RETIESH REDDY
52	20241A0153	TEJAVATH KALYANI
53	20241A0154	TELLAPURAM PRUDHVI RAJ
54	20241A0155	THADEM ROHITH
55	20241A0156	THUMMALA RAJASHEKAR
56	20241A0157	UVSGR KAMESWARA SAI KARTHIK
57	20241A0158	SREERAM VATTEM
58	20241A0159	V VIKESH
59	20241A0160	VENNAM SRIKAR
60	21245A0101	GUMADAVELLI ARUN KUMAR
61	21245A0102	KADIRABAD SRIRAM
62	21245A0103	MANIKONDA NIKITHA
63	21245A0104	PARIDULA PRATHYUSHA
64	21245A0105	PATERU MOUNA

Signature of HOD

Signature of faculty

Date:

Date:

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GUIDELINES TO STUDY THE COURSE/SUBJECT

Academic Year : 2021-22

Semester : I

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

Course/Subject: Building Materials and Construction Planning **Course Code: GR20A2009**

Name of the Faculty: Mrs I.Chandana **Dept**: Civil Engineering
Designation: Assistant Professor

Guidelines to students

Guidelines to study the Course: Building Materials and Construction Planning

The course helps the students to learn and understand the importance of building materials in different phases of construction. This course makes the students to understand the composition and manufacturing of bricks; building stones classification and quarrying properties; wood structure, types and properties; ingredient of cement, manufacturing and chemical composition; masonry and finishes form work; building components, building services and building planning.
So the students should have the prerequisites

- knowledge of various building materials
- knowledge of building components and building services

To become expertise in this course, students need to be perfect with the basic concepts of various building materials and building components.

Where will this subject help?

- This course let the students to work with various types of building materials.
- This course let the students to learn the manufacture process of cement.
- This course let the students to identify the building components, types and classification.
- This course let the students to determine types of bonds in Stone Masonry and Brick Masonry.
- This course let the students to calculate bearing capacity of soils.

Books / Material

TEXT BOOKS
1. SK Duggal, Building Materials, New Age Publications 4th Edition, April, 2014.

2. B C Punmia, Ashok Kumar Jain and Arun Kumar Jain, Building Construction, Laxmi Publications (P) Ltd., New Delhi, 10th Edition, 2013.

REFERENCES
1. Roy Chudley "Construction Technology" Vol. – 1 & 2,2nd Edition, Longman, UK, 1987.
2. P C Varghese, Building Construction, Prentice Hall of India Private Ltd., New Delhi,2nd Edition, 2007.

Websites:

https://archive.nptel.ac.in/courses/105/106/105106206/

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

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Date: Date:

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COURSE SCHEDULE

Academic Year : 2021-22

Semester : I

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

Course/Subject: Building Materials and Construction Planning **Course Code: GR20A2009**

Name of the Faculty: Mrs I.Chandana **Dept**: Civil Engineering

Designation: Assistant Professor

The Schedule for the whole Course / Subject is:

S. No.	Description	Duration (Date)		Total No. Of Periods
		From	To	
1.	**UNIT I:** Introduction & Index Properties of Soils	09/10/2021	03-11-2021	14
2.	**UNIT II:** Permeability & Seepage through soils	03/11/2021	17-11-2021	09
3.	**UNIT III:** Stress distribution in soils	20/11/2021	08-12-2021	11
4.	**UNIT IV:** Compaction & Consolidation	08/12/2021	22-12-2021	11
5.	**UNIT V:** Shear strength of soils	27/12/2021	02-02-2022	12

Total No. of Instructional periods available for the course: 57 Hours / Periods

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COURSE PLAN

Academic Year: 2021-2022 **Program:** B.Tech Civil Engineering

Course: Building Materials and Construction Planning (GR18) **Class**: II Yr **Sem:** I

Faculty Name: Mrs I. Chandana, Asst. Prof. in Civil Engineering

S.No	Unit No.	Date	No. of Periods	Topics	Course Objectives & Outcomes	References Text Book Page No.
1	I	9/10/21		Introduction	COb-1 CO-1	SK Duggal pp.52-54
2		11/10		Building stones	COb-1 CO-1	SK Duggal pp.54-56
3		13/10		Classification of Building stones	COb-1 CO-1	SK Duggal pp.56-59
4		13/10		Quarrying	COb-1 CO-1	SK Duggal pp.59-60
5		18/10		Methods of Quarrying	COb-1 CO-1	SK Duggal pp.60-63
6		20/10		Structural Requirement	COb-1 CO-1	SK Duggal pp.63-64
7		20/10		Dressing of Stones	COb-1 CO-1	SK Duggal pp.64-64
8		23/10		Types of dressing	COb-1 CO-1	SK Duggal pp.64-66
9		25/10		Tools for dressing of stones	COb-1 CO-1	SK Duggal pp.66-67
10		27/10		Composition of brick earth	COb-1 CO-1	SK Duggal pp.11-12
11		27/10		Manufacturing of brick	COb-1 CO-1	SK Duggal pp.18-24
12		30/10		Testing of Bricks	COb-1 CO-1	SK Duggal pp.26-29
13		01/11		Types of Tiles	COb-1 CO-1	SK Duggal pp.33-34
14		03/11		Manufacturing of Tiles	COb-1 CO-1	SK Duggal pp.34-38
15	II	03/11		Ingredients of Cement	COb-2 CO-2	SK Duggal pp.146-149
16		06/11		Manufacturing of cement	COb-2 CO-2	SK Duggal pp.152-155

17		08/11		Testing of Cement	COb-2 CO-2	SK Duggal pp.156-166
18		10/11		Mineral admixtures	COb-2 CO-2	SK Duggal pp.296-298
19		10/11		Chemical admixtures	COb-2 CO-2	SK Duggal pp.298-301
20		13/11		Various ingredients of Lime	COb-2 CO-2	SK Duggal pp.214-215
21		15/11		Constituents of Limestone	COb-2 CO-2	SK Duggal pp.215-216
22		17/11		Classification of Lime	COb-2 CO-2	SK Duggal pp.216-218
23		17/11		Manufacturing of Lime	COb-2 CO-2	SK Duggal pp.218-224
24	III	20/11		Wood-Structure	COb-3 CO-3	SK Duggal pp.91-92
25		22/11		Types of Wood	COb-3 CO-3	SK Duggal pp.92-94
26		22/11		Properties of Wood	COb-3 CO-3	SK Duggal pp.94-96
27		24/11		Seasoning	COb-3 CO-3	SK Duggal pp.96-100
28		24/11		Defects	COb-3 CO-3	SK Duggal pp.101-108
29		27/11		Types of glasses	COb-3 CO-3	SK Duggal pp.393-395
30		29/11		Manufacturing of glass	COb-3 CO-3	SK Duggal pp.395-397
31		29/11		Constituents of paints	COb-3 CO-3	SK Duggal pp.421-424
32		01/12		Types of paints	COb-3 CO-3	SK Duggal pp.424-428
33		01/12		Lintel, Foundation	COb-3 CO-3	PC Varghese pp.76-85
34		08/12		Doors & Windows - materials and types	COb-3 CO-3	PC Varghese pp.219-225
35	IV	08/12		Brick Masonry- Types	COb-4 CO-4	PC Varghese pp.59-60
36		11/12		Brick bonds	COb-4 CO-4	PC Varghese pp.60-65
37		11/12		Stone Masonry- Types	COb-4 CO-4	PC Varghese pp.66-75
38		13/12		Concrete reinforced bricks	COb-4 CO-4	PC

						Varghese pp.63-64
39		15/12		Glass reinforced brick	COb-4 CO-4	PC Varghese pp.64-65
40		15/12		Finishing Slope	COb-4 CO-4	PC Varghese pp.136-140
41		18/12		Pointing	COb-4 CO-4	PC Varghese pp.140-146
42		20/12		Types of ACP (Aluminium, composite panel)	COb-4 CO-4	PC Varghese pp.146-147
43		20/12		Form Works - Requirements	COb-4 CO-4	PC Varghese pp.115-117
44		22/12		Scaffolding	COb-4 CO-4	PC Varghese pp.117-122
45		22/12		Shoring	COb-4 CO-4	PC Varghese pp.122-127
46	V	27/12		Building Services, Plumbing services	COb-5 CO-5	PC Varghese pp.307-313
47		29/12		Water distribution, Sanitary lines and fittings	COb-5 CO-5	PC Varghese pp.313-316
48		29/12		Ventilators	COb-5 CO-5	PC Varghese pp.361-365
49		01/01/22		functional requirements, Systems of ventilators	COb-5 CO-5	PC Varghese pp.365-367
50		03/01		Air conditioning essentials, Types	COb-5 CO-5	PC Varghese pp.367-374
51		05/01		Acoustics – characteristics & Absorption	COb-5 CO-5	PC Varghese pp.375-385
52		05/01		Fire protections and fire hazards & materials and construction	COb-5 CO-5	PC Varghese pp.343-350
53		17/01		Principles of Building planning, Classification of Building	COb-5 CO-5	PC Varghese pp.359-360
54		19/01		Acoustics - characteristics	COb-5 CO-5	PC

						Varghese pp.59-60
55		24/01		Classification of Buildings	COb-5 CO-5	PC Varghese pp.355-358
56		31/01		Building Regulations	COb-5 CO-5	PC Varghese pp.358-559
57		02/02		Building by-laws	COb-5 CO-5	PC Varghese pp.359-360

Signature of HOD

Date:

Signature of faculty

Date:

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SCHEDULE OF INSTRUCTIONS
UNIT PLAN

Academic Year : 2021-22

Semester : I

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

Course/Subject: Building Materials and Construction Planning **Course Code: GR20A2009**

Name of the Faculty: Mrs I.Chandana **Dept**: Civil Engineering

Designation: Assistant Professor

Lesson No.	Unit No.	Date	No. of Periods	Topics	Course Objectives & Outcomes	References Text Book Page No.
1	I	9/10/21	1	Introduction	COb-1 CO-1	SK Duggal pp.52-54
2		11/10	1	Building stones	COb-1 CO-1	SK Duggal pp.54-56
3		13/10	1	Classification of Building stones	COb-1 CO-1	SK Duggal pp.56-59
4		13/10	1	Quarrying	COb-1 CO-1	SK Duggal pp.59-60
5		18/10	1	Methods of Quarrying	COb-1 CO-1	SK Duggal pp.60-63
6		20/10	1	Structural Requirement	COb-1 CO-1	SK Duggal pp.63-64
7		20/10	1	Dressing of Stones	COb-1 CO-1	SK Duggal pp.64-64
8		23/10	1	Types of dressing	COb-1 CO-1	SK Duggal pp.64-66

9		25/10	1	Tools for dressing of stones	COb-1 CO-1	SK Duggal pp.66-67
10		27/10	1	Composition of brick earth	COb-1 CO-1	SK Duggal pp.11-12
11		27/10	1	Manufacturing of brick	COb-1 CO-1	SK Duggal pp.18-24
12		30/10	1	Testing of Bricks	COb-1 CO-1	SK Duggal pp.26-29
13		01/11	1	Types of Tiles	COb-1 CO-1	SK Duggal pp.33-34
14		03/11	1	Manufacturing of Tiles	COb-1 CO-1	SK Duggal pp.34-38

Signature of HOD

Signature of faculty

Date:

Date:

Note: 1. Ensure that all topics specified in the course are mentioned.
2. Additional topics covered, if any, may also be specified in bold
3. Mention the corresponding course objective and out come numbers against each topic.

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SCHEDULE OF INSTRUCTIONS
UNIT PLAN

Academic Year : 2021-22

Semester : I

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

Course/Subject: Building Materials and Construction Planning **Course Code: GR20A2009**

Name of the Faculty: Mrs I.Chandana **Dept**: Civil Engineering

Designation: Assistant Professor

Lesson No.	Unit No.	Date	No. of Periods	Topics	Course Objectives & Outcomes	References Text Book Page No.
1	II	03/11		Ingredients of Cement	COb-2 CO-2	SK Duggal pp.146-149
2		06/11		Manufacturing of cement	COb-2 CO-2	SK Duggal pp.152-155
3		08/11		Testing of Cement	COb-2 CO-2	SK Duggal pp.156-166
4		10/11		Mineral admixtures	COb-2 CO-2	SK Duggal pp.296-298
5		10/11		Chemical admixtures	COb-2 CO-2	SK Duggal pp.298-301
6		13/11		Various ingredients of Lime	COb-2 CO-2	SK Duggal pp.214-215
7		15/11		Constituents of Limestone	COb-2 CO-2	SK Duggal pp.215-216
8		17/11		Classification of Lime	COb-2 CO-2	SK Duggal pp.216-218

9		17/11		Manufacturing of Lime	COb-2 CO-2	SK Duggal pp.218-224

Signature of HOD

Signature of faculty

Date:

Date:

Note: 1. Ensure that all topics specified in the course are mentioned.
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SCHEDULE OF INSTRUCTIONS
UNIT PLAN

Academic Year : 2021-22

Semester : I

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

Course/Subject: Building Materials and Construction Planning **Course Code: GR20A2009**

Name of the Faculty: Mrs I.Chandana **Dept**: Civil Engineering

Designation: Assistant Professor

Lesson No.	Unit No.	Date	No. of Periods	Topics	Course Objectives & Outcomes	References Text Book Page No.
1	III	20/11		Wood-Structure	COb-3 CO-3	SK Duggal pp.91-92
2		22/11		Types of Wood	COb-3 CO-3	SK Duggal pp.92-94
3		22/11		Properties of Wood	COb-3 CO-3	SK Duggal pp.94-96
4		24/11		Seasoning	COb-3 CO-3	SK Duggal pp.96-100
5		24/11		Defects	COb-3 CO-3	SK Duggal pp.101-108
6		27/11		Types of glasses	COb-3 CO-3	SK Duggal pp.393-395
7		29/11		Manufacturing of glass	COb-3 CO-3	SK Duggal pp.395-397
8		29/11		Constituents of paints	COb-3 CO-3	SK Duggal pp.421-424

9		01/12		Types of paints	COb-3 CO-3	SK Duggal pp.424-428
10		01/12		Lintel, Foundation	COb-3 CO-3	PC Varghese pp.76-85
11		08/12		Doors & Windows - materials and types	COb-3 CO-3	PC Varghese pp.219-225

Signature of HOD

Signature of faculty

Date:

Date:

Note: 1. Ensure that all topics specified in the course are mentioned.
2. Additional topics covered, if any, may also be specified in bold
3. Mention the corresponding course objective and out come numbers against each topic.

Gokaraju Rangaraju Institute of Engineering and Technology
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SCHEDULE OF INSTRUCTIONS
UNIT PLAN

Academic Year : 2021-22

Semester : I

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

Course/Subject: Building Materials and Construction Planning **Course Code: GR20A2009**

Name of the Faculty: Mrs I.Chandana **Dept**: Civil Engineering

Designation: Assistant Professor

Lesson No.	Unit No.	Date	No. of Periods	Topics	Course Objectives & Outcomes	References Text Book Page No.
1	IV	08/12		Brick Masonry- Types	COb-4 CO-4	PC Varghese pp.59-60
2		11/12		Brick bonds	COb-4 CO-4	PC Varghese pp.60-65
3		11/12		Stone Masonry- Types	COb-4 CO-4	PC Varghese pp.66-75
4		13/12		Concrete reinforced bricks	COb-4 CO-4	PC Varghese pp.63-64
5		15/12		Glass reinforced brick	COb-4 CO-4	PC Varghese pp.64-65
6		15/12		Finishing Slope	COb-4 CO-4	PC Varghese pp.136-140
7		18/12		Pointing	COb-4 CO-4	PC Varghese pp.140-146
8		20/12		Types of ACP (Aluminium, composite panel)	COb-4 CO-4	PC Varghese pp.146-147

9		20/12		Form Works - Requirements	COb-4 CO-4	PC Varghese pp.115-117
10		22/12		Scaffolding	COb-4 CO-4	PC Varghese pp.117-122
11		22/12		Shoring	COb-4 CO-4	PC Varghese pp.122-127

Signature of HOD

Signature of faculty

Date:

Date:

Note: 1. Ensure that all topics specified in the course are mentioned.
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3. Mention the corresponding course objective and out come numbers against each topic.

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SCHEDULE OF INSTRUCTIONS
UNIT PLAN

Academic Year : 2021-22

Semester : I

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

Course/Subject: Building Materials and Construction Planning **Course Code: GR20A2009**

Name of the Faculty: Mrs I.Chandana **Dept**: Civil Engineering

Designation: Assistant Professor

Lesson No.	Unit No.	Date	No. of Periods	Topics	Course Objectives & Outcomes	References Text Book Page No.
1	V	27/12		Building Services, Plumbing services	COb-5 CO-5	PC Varghese pp.307-313
2		29/12		Water distribution, Sanitary lines and fittings	COb-5 CO-5	PC Varghese pp.313-316
3		29/12		Ventilators	COb-5 CO-5	PC Varghese pp.361-365
4		01/01/22		functional requirements, Systems of ventilators	COb-5 CO-5	PC Varghese pp.365-367
5		03/01		Air conditioning essentials, Types	COb-5 CO-5	PC Varghese pp.367-374
6		05/01		Acoustics – characteristics & Absorption	COb-5 CO-5	PC Varghese pp.375-385
7		05/01		Fire protections and fire hazards & materials and Construction	COb-5 CO-5	PC Varghese pp.343-350

8		17/01		Principles of Building planning, Classification of Building	COb-5 CO-5	PC Varghese pp.359-360
9		19/01		Acoustics - characteristics	COb-5 CO-5	PC Varghese pp.59-60
10		24/01		under pinning, Cladding	COb-5 CO-5	PC Varghese pp.355-358
11		31/01		Plastering	COb-5 CO-5	PC Varghese pp.358-559
12		02/02		Building by-laws	COb-5 CO-5	PC Varghese pp.359-360

Signature of HOD

Signature of faculty

Date:

Date:

Note: 1. Ensure that all topics specified in the course are mentioned.
2. Additional topics covered, if any, may also be specified in bold
3. Mention the corresponding course objective and out come numbers against each topic.

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

Lesson No: 1 Duration of Lesson: 45 minutes

Lesson Title: Classification of bricks, I, II, III, IV Class brick, based on use

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn about classification of bricks based on physical properties
2. Find classification of bricks based on use

TEACHING AIDS : White board, marker, power point presentation

TEACHING POINTS :

Classification of bricks,I,II,III,IV Class brick, based on use

Assignment / Questions:

1. Define about classification of bricks based on physical properties (C objectives1, C outcomes 1)
2. Discuss about classification of bricks based on use (C objectives1, C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 2 Duration of Lesson: 50minutes

Lesson Title: Ingradients of brick earth, Harmful substances

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Find ingredients of brick earth
2. Assess harmful substances in brick earth

TEACHING AIDS : White board, marker, power point presentation

TEACHING POINTS :

Ingredients of brick earth, Harmful substances

Assignment / Questions:

1. Discuss about ingredients of bricks (C objectives1, C outcomes 1)
2. Describe about harmful substances present in brick earth (C objectives1, C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 3 Duration of Lesson: 50minutes

Lesson Title: Tampering, Moulding, drying, kiln burning

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Demonstrate tampering of brick earth
2. Understand moulding and drying of bricks
3. Learn kiln burning of bricks

TEACHING AIDS : White board, marker, power point presentation

TEACHING POINTS :

Tampering, Moulding, drying, kiln burning of bricks

Assignment / Questions:

1. Describe about tampering of brick earth (C objectives1, C outcomes 1)
2. Explain about drying methods of brick (C objectives1, C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 4 Duration of Lesson: 50minutes

Lesson Title: Classification of bricks based on strength, finish, burning

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Identify classification of brick based on strength
2. Learn classification of brick based on finish
3. Recognize classification of brick based on burning

TEACHING AIDS : White board, marker, power point presentation

TEACHING POINTS :

Classification of bricks based on strength, finish, burning

Assignment / Questions:

1. Explain about classification of brick based on strength (C objectives1 C outcomes 1)
2. Describe about classification of brick based on finish (C objectives1 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 5 Duration of Lesson: 50minutes

Lesson Title: Classification of rocks, geological, physical, chemical

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Identify classification of rocks based on geological
2. Learn classification of brick based on physical and chemical

TEACHING AIDS : White board, marker, power point presentation

TEACHING POINTS :

Classification of rocks, geological, physical, chemical

Assignment / Questions:

1. Discuss about classification of rocks based on physical (C objectives1 C outcomes 1)
2. Explain about classification of rocks based on geological (C objectives1 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 6 Duration of Lesson: 50minutes

Lesson Title: Wedging, blasting, heating, precautions, seasoning of stones

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn wedging, heating, blasting of rocks
2. Find precautions during blasting process
3. Analyse seasoning of stones

TEACHING AIDS : White board, marker

TEACHING POINTS :

Wedging, blasting, heating, precautions, seasoning of stones

Assignment / Questions:

1. Describe about wedging , heating, blasting process of rocks (C objectives1 C outcomes 1)
2. Discuss about precautions to be taken during blasting process (C objectives1 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 7 Duration of Lesson: 50minutes

Lesson Title: Testing of stone and deterioration of stone

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn testing of stones
2. Explore about deterioration of stones

TEACHING AIDS : White board, marker
TEACHING POINTS :

Testing of stone and deterioration of stone

Assignment / Questions:

1. Describe about deterioration of stones (C objectives2 C outcomes 1)
2. Explain about testing of stones (C objectives2 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 8 Duration of Lesson: 50minutes

Lesson Title: Classification of tiles, testing of tiles

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Find classification of tiles
2. Identify testing of tiles

TEACHING AIDS : White board, marker
TEACHING POINTS :

Classification of tiles, testing of tiles

Assignment / Questions:

1. Describe about classification of tiles (C objectives1 C outcomes 1)
2. Discuss about testing of tiles (C objectives1 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 9 Duration of Lesson: 50minutes

Lesson Title: Wedging, blasting, heating, precautions, seasoning of stones

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Understand wedging, heating, blasting of rocks
2. Learn precautions during blasting process

TEACHING AIDS : Power point presentation
TEACHING POINTS :

Wedging, blasting, heating, precautions, seasoning of stones

Assignment / Questions:

1. Discuss about wedging , heating, blasting process of rocks (C objectives 1 C outcomes 1)
2. Describe about precautions to be taken during blasting process (C objectives1 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 10 Duration of Lesson: 50minutes

Lesson Title: Dressing, uses, characteristics of good stone, testing of stone

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn dressing of rocks
2. Explore characteristics of stone

TEACHING AIDS : Power point presentation
TEACHING POINTS :

Wedging, blasting, heating, precautions, seasoning of stones

Assignment / Questions:

1. Write about dressing, testing of stones (C objectives1 C outcomes 1)
2. Explain about characteristics of stones (C objectives1 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 11 Duration of Lesson: 50minutes

Lesson Title: Classification of tiles

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn classification of Tiles

TEACHING AIDS : Power point presentation
TEACHING POINTS :

Classification of tiles

Assignment / Questions:

1. Write about classification of tiles(C objectives1 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 12 Duration of Lesson: 50minutes

Lesson Title: Various patterns of tiles

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Understand various patterns of tiles

TEACHING AIDS : Power point presentation
TEACHING POINTS :

Various patterns of tiles

Assignment / Questions:

1. Write about of Various patterns tiles(C objectives1 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 13 Duration of Lesson: 50minutes

Lesson Title: Manufacturing of tiles

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Explore manufacturing of tiles

TEACHING AIDS : Power point presentation
TEACHING POINTS :

Manufacturing of tiles

Assignment / Questions:
1. Write about of Manufacturing of tiles (C objectives1 C outcomes 2)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 14 Duration of Lesson: 50minutes

Lesson Title: Manufacturing of tiles

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn Manufacturing of tiles

TEACHING AIDS : Power point presentation
TEACHING POINTS :

Manufacturing of tiles

Assignment / Questions:
1. Write about of Manufacturing of tiles (C objectives 1 C outcomes 1)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 15 Duration of Lesson: 50minutes

Lesson Title: Manufacture of cement, dry process, wet process

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Identify Manufacture of cement, dry process, wet process

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Manufacture of cement, dry process, wet process

Assignment / Questions:
1. Explain about of Manufacture of cement, dry process, wet process (C objectives 2 C outcomes 2)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.ChandanaDept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 16 Duration of Lesson: 50minutes

Lesson Title: Testing of cement, fineness test, consistency test

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Importance of testing of cement, fineness test, consistency test

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Testing of cement, fineness test, consistency test

Assignment / Questions:
1. Describe about Testing of cement, fineness test, consistency test (C objectives 2 C outcomes 2)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 17 Duration of Lesson: 50minutes

Lesson Title: Soundness test, Initial, final setting times

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn about Soundness test, Initial, final setting times

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Soundness test, Initial, final setting times

Assignment / Questions:
1. Write about Soundness test, Initial, final setting times (C objectives 2 C outcomes 2)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 18 Duration of Lesson: 50minutes

Lesson Title: Compression strength test, tensile, types of cement

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Analyse Compression strength test and tensile strength test and types of cement

TEACHING AIDS : White board, marker, Power point presentation

TEACHING POINTS :

Compression strength test, tensile, types of cement

Assignment / Questions:

1. Discuss about Compression strength test, tensile, types of cement (C objectives 2 C outcomes 2)

Signature of faculty

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 19 Duration of Lesson: 50minutes
Lesson Title: Rapid Hardening portland cement, High alumina cement

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Differentiate between Rapid Hardening portland cement and High alumina cement

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Rapid Hardening portland cement, High alumina cement

Assignment / Questions:
1. Write about Rapid Hardening portland cement, High alumina cement (C objectives2 C outcomes 2)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 20 Duration of Lesson: 50minutes

Lesson Title: Sulphate resisting pc, white and coloured cement

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Distinguish among Sulphate resisting pc, white and colored cement

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Sulphate resisting pc, white and colored cement

Assignment / Questions:
1. Describe about Sulphate resisting pc, white and coloured cement (C objectives2 C outcomes 2)

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LESSON PLAN

Academic **Y**ear : 2021-22 Date:

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 21 Duration of Lesson: 50minutes

Lesson Title: Varieties of lime, pure lime, stone lime

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Recognize Varieties of lime, pure lime, stone lime

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Varieties of lime, pure lime, stone lime

Assignment / Questions:
1. Write about Varieties of lime, pure lime, stone lime (C objectives2 C outcomes 2)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs. I. Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 22 Duration of Lesson: 50minutes

Lesson Title: Lump lime, milk lime, impurities of lime, classification

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn about Lump lime, milk lime, impurities of lime,classification

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Lump lime, milk lime, impurities of lime,classification

Assignment / Questions:
1. Write about Lump lime, milk lime, impurities of lime,classification (C objectives 2 C outcomes 2)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 23 Duration of Lesson: 50minutes

Lesson Title: Different types of admixtures, accelerators

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn Different types of admixtures, accelerators

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Different types of admixtures, accelerators

Assignment / Questions:
1. Write about Different types of admixtures, accelerators (C objectives 2 C outcomes 2)

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LESSON PLAN

Academic **Y**ear : 2021-22
Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 24 Duration of Lesson: 50minutes

Lesson Title: Wood, Classification of trees, Endogeneous, exogeeneous

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn about wood, Classification of trees, Endogeneous, exogeeneous

TEACHING AIDS : White board, marker
TEACHING POINTS :

Wood, Classification of trees, Endogeneous, exogeeneous

Assignment / Questions:
1. Write about classification of trees(C objectives 3 C outcomes 3)

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LESSON PLAN

Academic **Y**ear : 2021-22 Date:

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 25 Duration of Lesson: 50minutes

Lesson Title: Wood, Classification of trees, Endogeneous, exogeeneous

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Identify about Wood, Classification of trees, Endogeneous, exogeeneous

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Wood, Classification of trees, Endogeneous, exogeeneous

Assignment / Questions:
1. Describe about Wood, Classification of trees, Endogeneous, exogeeneous (C objectives 3 C outcomes 3)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 26 Duration of Lesson: 50minutes

Lesson Title: Glass- constituents

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Analyse about Glass- constituents

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Glass- constituents

Assignment / Questions:
1. Discuss about Glass- constituents (C objectives 3 C outcomes 3)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 27 Duration of Lesson: 50minutes

Lesson Title: Paints-manufacture

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Learn about Paints-manufacture

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Paints-manufacture

Assignment / Questions:
1. Explain about Paints-manufacture (C objectives 3 C outcomes 3)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 28 Duration of Lesson: 50minutes

Lesson Title: Building components, arches, types

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Explore about Building components, arches, types

TEACHING AIDS : White board, marker, power point presentation
TEACHING POINTS :

Building components, arches, types

Assignment / Questions:
1. Write about Building components, arches, types (C objectives 3 C outcomes 3)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 29 Duration of Lesson: 50minutes

Lesson Title: Staircase-components

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Analyse about Staircase-components

TEACHING AIDS : White board, marker, power point presentation
TEACHING POINTS :

Staircase-components

Assignment / Questions:
1. Write about Staircase-components (C objectives 3 C outcomes 3)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 30 Duration of Lesson: 50minutes

Lesson Title: Roofs, pitched roofs

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Understand about Roofs, pitched roofs

TEACHING AIDS : White board, marker
TEACHING POINTS :

Roofs, pitched roofs

Assignment / Questions:
1. Describe about Roofs, pitched roofs (C objectives 3 C outcomes 3)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 31 Duration of Lesson: 50minutes

Lesson Title: Types of floors

INSTRUCTIONAL/LESSON OBJECTIVES:

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

1. Find about types of floors

TEACHING AIDS : White board, marker, power point presentation
TEACHING POINTS :

types of floors

Assignment / Questions:
1. Explain about types of floors (C objectives 3 C outcomes 3)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 32 Duration of Lesson: 50minutes

Lesson Title: Types of doors

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Uses about different types of doors

TEACHING AIDS : White board, marker, power point presentation
TEACHING POINTS :

types of floors

Assignment / Questions:
1. Describe about types of floors (C objectives 3 C outcomes 3)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 33 Duration of Lesson: 50minutes

Lesson Title: Foundations types

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Understand about foundations types

TEACHING AIDS : White board, marker
TEACHING POINTS :

Foundations types

Assignment / Questions:
1. Write about foundations types (C objective 3 C outcomes 3)

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Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 34 Duration of Lesson: 50minutes

Lesson Title: Shallow and deep foundation

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Learn about Shallow and deep foundation

TEACHING AIDS : Power point presentation
TEACHING POINTS :

Shallow and deep foundation

Assignment / Questions:
1. Discuss about Shallow and deep foundation (C objectives 3 C outcomes 3)

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Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 35 Duration of Lesson: 50minutes

Lesson Title: Masonry classification, stone masonry

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Identify about Masonry classification, stone masonry

TEACHING AIDS : White board, marker,Power point presentation
TEACHING POINTS :

Masonry classification, stone masonry

Assignment / Questions:
1. Describe about masonry classification, stone masonry (C objectives 4 C outcomes 4)

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Academic **Y**ear : 2021-22

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Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 36 Duration of Lesson: 50minutes

Lesson Title: Rubble masonry, flint rouble

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Explore about Rubble masonry, flint rubble

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Rubble masonry, flint rubble

Assignment / Questions:
1. Write about Rubble masonry, flint rubble (C objectives 4 C outcomes 4)

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LESSON PLAN

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Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 37 Duration of Lesson: 50minutes

Lesson Title: Coursed square rubble masonry

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Recognize about Coursed square rubble masonry

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Coursed square rubble masonry

Assignment / Questions:
1. Describe about Coursed square rubble masonry (C objectives 4 C outcomes 4)

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Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 38 Duration of Lesson: 50minutes

Lesson Title: Dry rubble masonry

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Understand about Dry rubble masonry

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Dry rubble masonry

Assignment / Questions:
1. Write about Dry rubble masonry (C objectives 4 C outcomes 4)

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Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 39 Duration of Lesson: 50minutes

Lesson Title: Brick masonry, bonds, rules for bonding

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Explore about Brick masonry, bonds, rules for bonding

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Brick masonry, bonds, rules for bonding

Assignment / Questions:
1. Explain about Brick masonry, bonds, rules for bonding (C objectives 4 C outcomes 4)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 40 Duration of Lesson: 50minutes

Lesson Title: Stretcher, header, English, Flemish

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Analyse about Stretcher, header, English, Flemish

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Stretcher, header, English, Flemish

Assignment / Questions:
1. Discuss about Stretcher, header, English, Flemish (C objectives 4 C outcomes 4)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 41 Duration of Lesson: 50minutes

Lesson Title: Double Flemish bond

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Learn about Double Flemish bond

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Double Flemish bond

Assignment / Questions:
1. Describe about Double Flemish bond (C objectives 4 C outcomes 4)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 42 Duration of Lesson: 50minutes

Lesson Title: Single Flemish bond

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Understand about single Flemish bond

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

single Flemish bond

Assignment / Questions:
1. Write about single Flemish bond (C objectives 4 C outcomes 4)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 43 Duration of Lesson: 50minutes

Lesson Title: Mud bond, stucco plastering

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Find about Mud bond, stucco plastering

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Mud bond, stucco plastering

Assignment / Questions:
1. Explain about Mud bond, stucco plastering (C objectives 4 C outcomes 4)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 44 Duration of Lesson: 50minutes

Lesson Title: Defects, special materials for plastering

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Understand about Defects, special materials for plastering

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Defects, special materials for plastering

Assignment / Questions:
1. Discuss about Defects, special materials for plastering (C objectives 4 C outcomes 4)

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LESSON PLAN

Academic **Y**ear : 2021-22

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Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 45 Duration of Lesson: 50minutes

Lesson Title: Form works

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Differentiate about Scaffolding Shoring and Underpinning

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Scaffolding Shoring and Underpinning

Assignment / Questions:
1. Explain about Scaffolding Shoring and Underpinning (C objectives 4 C outcomes 4)

Signature of faculty

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LESSON PLAN

Academic **Y**ear : 2021-22

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Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 46 Duration of Lesson: 50minutes

Lesson Title: Plumbing services, traps
Ventilation system, water closets

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Understand about Plumbing services, traps
Ventilation system, water closets

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Plumbing services, traps Ventilation system, water closets

Assignment / Questions:

1. Ventilation system, water closets (C objectives 5 C outcomes 5)

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LESSON PLAN

Academic **Y**ear : 2021-22

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Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 47 Duration of Lesson: 50minutes

Lesson Title: Air conditioning essentials

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Learn about Air conditioning essentials

TEACHING AIDS : White board, marker, Power point presentation

TEACHING POINTS :

Air conditioning essentials

Assignment / Questions:
1. Write about air conditioning essentials (C objectives 5 C outcomes 5)

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Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 48 Duration of Lesson: 50minutes

Lesson Title: Acoustics, fire protections

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Use about Acoustics, fire protections

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Acoustics, fire protections

Assignment / Questions:
1. Explain about acoustics, fire protections (C objectives 5 C outcomes 5)

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LESSON PLAN

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Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 49 Duration of Lesson: 50minutes

Lesson Title: Fire hazards

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Identify about Fire hazards

TEACHING AIDS : White board, marker, Power point presentation

TEACHING POINTS :

Fire hazards

Assignment / Questions:
1. Write about fire hazards (C objectives 5 C outcomes 5)

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LESSON PLAN

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Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 50 Duration of Lesson: 50minutes

Lesson Title: Classification of fire resisting materials

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Explore about classification of fire resisting materials

TEACHING AIDS : White board, marker, Power point presentation

TEACHING POINTS :

Classification of fire resisting materials

Assignment / Questions:
1. Write about classification of fire resisting materials (C objectives 5 C outcomes 5)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 51 Duration of Lesson: 50minutes

Lesson Title: Building planning, objects

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Understand about building planning, objects

TEACHING AIDS : White board, marker, Power point presentation

TEACHING POINTS :

Building planning, objects

Assignment / Questions:
1. Discuss about building planning, objects (C objectives 5 C outcomes 5)

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LESSON PLAN

Academic **Y**ear : 2021-22 Date

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 52 Duration of Lesson: 50minutes

Lesson Title: Building construction stages

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Learn about building construction stages

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Building construction stages

Assignment / Questions:
1. Write about building construction stages (C objectives5 C outcomes 5)

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Academic **Y**ear : 2021-22

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Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 53 Duration of Lesson: 50minutes

Lesson Title: Classification of buildings

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Understand about classification of buildings

TEACHING AIDS : White board, marker, Power point presentation

TEACHING POINTS :

Classification of buildings

Assignment / Questions:
1. Explain about classification of buildings (C objectives 5 C outcomes 5)

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 54 Duration of Lesson: 50minutes

Lesson Title: Classification of buildings

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Find about classification of buildings

TEACHING AIDS : White board, marker, Power point presentation
TEACHING POINTS :

Classification of buildings

Assignment / Questions:
1. Write about classification of buildings (C objectives 5 C outcomes 5)

Signature of faculty

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

LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 55 Duration of Lesson: 50minutes

Lesson Title: Classification of buildings

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Explore about classification of buildings

TEACHING AIDS : White board, marker, Power point presentation

TEACHING POINTS :

Classification of buildings

Assignment / Questions:
1. Discuss about classification of buildings (C objectives 5 Coutcomes 5)

Signature of faculty

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 56 Duration of Lesson: 50minutes

Lesson Title: Classification of buildings

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Learn about classification of buildings

TEACHING AIDS : White board, marker, Power point presentation

TEACHING POINTS :

Classification of buildings

Assignment / Questions:
1. Write about classification of buildings (C objectives 5 C outcomes 5)

Signature of faculty

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LESSON PLAN

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: ASSISTANT PROFESSOR

Lesson No: 57 Duration of Lesson: 50minutes

Lesson Title: Classification of buildings

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
1. Explore about classification of buildings

TEACHING AIDS : White board, marker, Power point presentation

TEACHING POINTS :

Classification of buildings

Assignment / Questions:
1. Discuss about classification of buildings (C objectives 5 C outcomes 5)

Signature of faculty

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COURSE COMPLETION STATUS

Academic **Y**ear : 2021-2022

Semester : I

Name of the Program: B.Tech Year:II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

Actual Date of Completion & Remarks, if any

Units	Remarks	No. of Objectives Achieved	No. of Outcomes Achieved
Unit 1	03-11-2021 Unit covered on time	1	1
Unit 2	17-11-2021 Unit covere on time	2	2
Unit 3	08-12-2021 Unit covered on time	3	3
Unit 4	22-12-2021 Unit covered on time	4	4
Unit 5	02-02-2022 Unit covered on time	5	5

Signature of HOD Signature of faculty

Date: Date:

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EVALUATION STRATEGY

Academic **Y**ear : 2021-2022

Semester : I

Name of the Program: B.Tech Year:II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

1. TARGET:

A) Percentage for pass: 90%

b) Percentage of class:

Total Strength: 63

S. No.	Class / Division	No. of Students
1	First Class with distinction	56
2	First Class	4
3	Pass Class	3

2. COURSE PLAN & CONTENT DELIVERY

S.No	Plan	Brief Description
1	Practice classes	75 Theory classes for Section A
2	Power point presentations	PPTs to understand various building planning and building bye laws
3	Assignments	Assignments for understanding basic building materials types

3. METHOD OF EVALUATION

3.1 Continuous Assessment Examinations

- Assignments: Assignments to assess the knowledge of the student on the basics and concepts in building materials types, uses and application; building planning and bye laws.
- Seminars: To assess the knowledge of the student in Building materials and construction planning.
- Quiz: To assess the knowledge of the student in various concepts and basics of Building materials and construction planning
- Internal Examination: Internal Examinations to assess their overall knowledge in Building materials and construction planning.

3.2. Semester/End Examination

To test their abilities in the course Building materials and construction planning and to approve their abilities learnt during the same.

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

Introducing some eco-friendly building materials uses to make optimal use of resources, produce minimum waste and are safe for the environment and people.

Signature of HOD Signature of faculty

MAPPING

GR20A2009/Building Materials and Construction Planning	**Program Outcomes**												**PSOs**	
Course Outcomes	**a**	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**	**l**	PSO1	PSO2
Distinguish between various types of building stones, bricks and tiles and their structural requirements.	M	M		H	H		M	H	M	H	H	H		H
Recognize the need and process of manufacture of cement and lime.	M	M		M	H		M	M	M	H	H	H	M	
Identify function of various materials like wood, glass, paints and building components.	M	H		H	H		M	H	M	H	H	H	M	
Find the importance of masonry, finishing and form woks.	M	H		H	H		M	H	M	H	H	H		M
Assess various building services and principles of building planning.	M	M		M	H		M	M	M	H	H	H	H	

RUBRIC TEMPLATE

Academic **Y**ear : 2021-22
Semester : I
Name of the Program: B.Tech Civil Engineering Year: II Section: A
Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009
Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering
Designation: Assistant Professor

Objective: To learn basics and concepts of building materials.
Student Outcome: Learn basic concepts manufacturing process of building materials and types of building components.

			Beginning	**Developing**	**Reflecting Development**	**Accomplished**	**Exemplary**	**Score**
S.No	**Name of the student**	**Performance Criteria**	**1**	**2**	**3**	**4**	**5**	
1		The level of knowledge on basic concepts of Building materials.	Low level	Able to understand	Ability to explain	Full knowledge	Thoroughly analysing & applying	5
		The level of knowledge on manufacturing of cement.	Low level	Able to understand	Ability to explain	Full knowledge	Thoroughly analysing & applying	4
		The level of knowledge to understand and analyse building components and form works.	Low level	Able to understand	Ability to explain	Full knowledge	Thoroughly analysing & applying	3
		Average Score						4

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TUTORIAL SHEET - 1

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Tutorial corresponds to Unit No. - I & Lesson

Q1. Write down the characteristic properties of good stone?

Q2. Define the term Dressing of Stones.

Q3. Define the term Admixtures and mention their types.

Objective Nos.: 1
Outcome Nos.: 1

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TUTORIAL SHEET - 2

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Tutorial corresponds to Unit No. – II & Lesson

Q1. Define Seasoning of timber. List out the defects in timber?

Q2. List out the ingredients of cement?

Q3. What do you mean by setting time of cement?

Objective Nos.: 2
Outcome Nos.: 2

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TUTORIAL SHEET - 3

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Tutorial corresponds to Unit No. - III & Lesson

Q1. Define arch .what are the components of an arch?

Q2. Explain about the types of roofs?

Q3. What are the advantages of damp proof coursing?

Objective Nos.: 3
Outcome Nos.: 3

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TUTORIAL SHEET - 4

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Tutorial corresponds to Unit No. - IV & Lesson

Q1. Write down the general requirements of mortars?

Q2. Differentiate between brick masonry and stone masonry?

Q3. Explain about the types of bonds in brick work.

Objective Nos.: 4
Outcome Nos.: 4

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TUTORIAL SHEET - 5

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Tutorial corresponds to Unit No. - V & Lesson

Q1. Define building planning. State its significance?

Q2. Write briefly the factors affecting building planning?

Q3. Write any four basic principles of building planning?

Objective Nos.: 5
Outcome Nos.: 5

Signature of HOD Signature of faculty

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ASSIGNMENT SHEET – I

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Assignment corresponds to Unit No. - I & Lesson

Q1. Write a brief note on Classification of Building Stones

Q2. What are the various tests to be conducted on Bricks? Explain them in Brief.

Q3. Discuss structural requirements of stones and bricks?

Objective Nos.: 1
Outcome Nos.: 1

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Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous)

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

ASSIGNMENT SHEET – II

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Assignment corresponds to Unit No. - II & Lesson

Q1. How do you manufacture cement. Distinguish wet and dry manufacturing process?

Q2. Discuss Mineral and Chemical Admixtures?

Q3. What is Slaked Lime?

Objective Nos.: 2
Outcome Nos.: 2

Signature of HOD Signature of faculty

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ASSIGNMENT SHEET – III

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Assignment corresponds to Unit No. - III & Lesson

Q1. What is seasoning of wood? Illustrate various defects of timber with sketches?

Q2. Enumerate the important types of Glass.

Q3. What is Heart Shake and Rind Gall?

Objective Nos.: 3
Outcome Nos.: 3

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ASSIGNMENT SHEET – IV

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Assignment corresponds to Unit No. - IV & Lesson

Q1. What is meant by Brick Masonry?

Q2. Write a brief note on various types of Bonds available in Brick Masonry with neat sketch

Q3. Differentiate between Underpinning and Scaffolding.

Objective Nos.: 4
Outcome Nos.: 4

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ASSIGNMENT SHEET – V

Academic **Y**ear : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: II Section: A

Course/Subject: Building Materials and Construction Planning Course Code: GR20A2009

Name of the Faculty: Mrs I.Chandana Dept.: Civil Engineering

Designation: Assistant Professor

This Assignment corresponds to Unit No. - V & Lesson

Q1. Discuss form work requirements?

Q2. What are the principles of Building Planning?

Q3. Why Ventilation is necessary in Building?

Objective Nos.: 5
Outcome Nos.: 5

Signature of HOD Signature of faculty

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY

(Autonomous)

II B. Tech I Semester Mid- I Examinations

BUILDING MATERIALS AND CONSTRUCTION PLANNING

(DEPARTMENT OF CIVIL ENGINEERING)

Time: 90 Minutes **Max Marks: 20**

SUBJECTIVE

(Answer ALL questions. All questions carry equal marks)

Time: 75 Minutes **3 * 5 = 15 Marks**

1	What are the various tests to be conducted on Bricks?	**[5]**	**1**	**1**
	OR			
2	Write a short note on composition of Lime and state its Classification.	**[5]**	**2**	**1**
3	Write a brief note on Manufacturing process of Cement (Either Wet Process or Dry process)	**[5]**	**2**	**2**
	OR			
4	What is tile and types of Tiles? Explain brief.	**[5]**	**1**	**2**
5	Differentiate between Initial setting time and final setting time of Cement.	**[5]**	**2**	**3**
	OR			
6	Give detailed note on Methods of Quarrying	**[5]**	**1**	**2**

Multiple choice Questions

1. The most important purpose of frog in a brick is to [ ]
   a) emboss manufacturer's name
   b) reduce the weight of brick
   c) **form keyed joint between brick and mortar**
   d) improve insulation by providing 'hollows
2. Water absorption for Ist class bricks should not be more than [ ]
   (a) 12% (b) **15%** (c) 20% (d) 25%
3. Consider the following operations of preparation of brick earth [ ]
   1. Digging 2. Weatherig 3. Tempering 4. Blending 5. Unsoiling

   The correct sequence of these operations are

   (a) **5, 1, 2, 4, 3** (b) 5, 1, 3, 2, 4 (c) 1, 5, 2, 4, 3 (d) 5, 1, 4, 2, 3
4. The number of bricks required per cubic meter of brick masonry is [ ]
   (a) 400 (b) 450 (c) **500** (d) 550
5. Which of the following is hardest mineral? [ ]
   (a) Quartz (b) Felspar (c) **Garnet** (d) Amphibole
6. Marble is a [ ]
   (a) **stratified rock** (b) unstratified rock (c) foliated rock (d) argillaceous rock
7. The age of trees can be predicted by [ ]
   (a) length of medulary rays (b) **counting number of rings**

   (c) by measuring the diameter of pith (d) by the thickness of bark
8. Lumber [ ]
   (a) implies a living tree (b) is a part of felled tree

   (c) **is log of timber sawn into pieces of desired shape** (d) is used to denote standing timber.
9. Four main oxides present in ordinary Portland cement are: CaO, A12O3, SiO2 and Fe2O3. [ ]
   Identify the correct ascending order of their proportions in a typical composition of OPC

   (a) Al2O3, Fe2O3, CaO, SiO2 (b) A12O3, CaO, Fe2O3, SiO2

   (c) **Fe2O3, Al2O3, SiO2, CaO** (d) Fe2O3, SiO2, Al2O3, CaO
10. Before testing setting time of cement one should test cement for [ ]
    (a) soundness (b) strength (c) fineness (d) **consistency**

Signature of HOD
Date:

Signature of faculty
Date:

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

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

BUILDING MATERIALS AND CONSTRUCTION PLANNING

Course code: GR20A2009 Date: 04/02/2022

Time: 30 min Max. Marks: 10M

Answer any **two** questions

1. Write a brief note on Classification of Paints [CO 3] [BL 2]
2. Differentiate between Formwork and Scaffolding [CO 4] [BL 3]
3. Write a brief note on Building by Laws [CO5] [BL 4]

***

Signature of HOD Signature of faculty

Date: Date:

Gokaraju Rangaraju Institute of Engineering And Technology

Department Of Civil Engineering

II B.Tech. I Sem., II Mid-Term Examination

Building Materials and Construction Planning

Multiple choice Question

1. The brick laid with its length parallel to the face of a wall, is a known as [ ]

(A) Header (B) Stretcher (C) Closer (D) None of these

2. The method of moving each brick through a small horizontal distance before it is finally laid in any brick wall and pressing it by means of brick hammer, is known as [ ]

(A) Trowelling (B) Laying (C) Grouting (D) Placing

3. A temporary rigid structure having platforms to enable masons to work at different stages of a building, is known as [ ]

(A) Scaffolding (B) Dead shore (C) Raking shore (D) Under pinning

4. The portion of a brick cut across the width, is called [ ]

(A) Closer (B) Half brick (C) Bed (D) Bat

5. The type of bond in which every course contains both headers and stretchers, is called[ ]

(A) Flemish bond (B) English bond (C) Russian bond (D) Mixed bond

6. A stair should not have pitch more than [ ]

(A) 25° (B) 30° (C) 40° (D) 50°

7. A wall constructed to resist the pressure of an earth filling, is called [ ]

(A) Retaining wall (B) Breast wall (C) Buttress (D) Parapet wall

8. The arrangement made to support an unsafe structure temporarily, is known as [ ]

(A) Underpinning (B) Scaffolding (C) Shoring (D) Jacking

9. The sound which continues even after its source is cut off, is called [ ]

(A) Reverberation (B) Echo (C) Intensity of sound (D) Interference

10. The maximum number of steps in a flight should generally be restricted to [ ]

(A) 10 (B) 12 (C) 15 (D) No limit

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Mid I Examination Marks

Programme: **B. Tech** Year: II Course: **BMCP** **A.Y: 2021-22 I Sem**

Section: A Faculty Name: I. Chandana

S. No	Roll No	Subjective Marks (15)	Objective Marks (5)	Total Marks (20)
1	20241A0101	8	2.5	10.5
2	20241A0102	0	0.5	0.5
3	20241A0103	8.5	1.5	10
4	20241A0104	11	2.5	13.5
5	20241A0105	0	1	1
6	20241A0106	6	1	7
7	20241A0107	0	1.5	1.5
8	20241A0108	4	5	9
9	20241A0109	3	2	5
10	20241A0110	1	1.5	2.5
11	20241A0111	5	3	8
12	20241A0112	14	2.5	16.5
13	20241A0113	11	3	14
14	20241A0114	1	3.5	4.5
15	20241A0115	11	4	15
16	20241A0116	12	3	15
17	20241A0117	15	3.5	18.5
18	20241A0118	13	3.5	16.5
19	20241A0119	11	3	14
20	20241A0120	AB	AB	AB
21	20241A0121	9	7	16
22	20241A0122	14	2	16
23	20241A0123	15	2.5	17.5
24	20241A0124	8	8	16
25	20241A0125	8	2	10
26	20241A0126	13	4	17
27	20241A0127	12	4	16
28	20241A0128	2	1.5	3.5
29	20241A0129	13	3	16

30	20241A0130	5	1	6
31	20241A0131	13	3	16
32	20241A0132	15	4.5	19.5
33	20241A0133	0	3	3
34	20241A0134	11	4	15
35	20241A0135	7	2	9
36	20241A0136	14	3	17
37	20241A0137	15	5	20
38	20241A0138	9	1.5	10.5
39	20241A0139	4	3	7
40	20241A0140	8	7	15
41	20241A0141	0	3	3
42	20241A0142	14	3.5	17.5
43	20241A0143	14	1.5	15.5
44	20241A0144	15	2.5	17.5
45	20241A0146	11	2.5	13.5
46	20241A0147	10	2.5	12.5
47	20241A0148	1	1.5	2.5
48	20241A0149	13	4	17
49	20241A0150	14	4	18
50	20241A0151	11	3	14
51	20241A0152	14	4	18
52	20241A0153	15	1	16
53	20241A0154	13	4	17
54	20241A0155	13	4.5	17.5
55	20241A0156	5.5	3.5	9
56	20241A0157	7	3	10
57	20241A0158	15	4.5	19.5
58	20241A0159	12	2	14
59	20241A0160	11	4	15
60	21245A0101	14	4	18
61	21245A0102	15	4.5	19.5
62	21245A0103	15	4.5	19.5
63	21245A0104	15	3	18
64	21245A0105	15	4	19

Signature of HOD

Signature of faculty

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

MID II MARKS LIST

Programme: **B. Tech** Year: II Course: **BMCP** **A.Y: 2021-22 I Sem**

Section: A Faculty Name: I. Chandana

S. No	Roll No	Subjective Marks (10)	Objective Marks (10)	Total Marks (20)
1	20241A0101	7	10	17
2	20241A0102	4	10	14
3	20241A0103	2	10	12
4	20241A0104	8	10	18
5	20241A0105	5	10	15
6	20241A0106	5	10	15
7	20241A0107	3	10	13
8	20241A0108	3	5	8
9	20241A0109	7	10	17
10	20241A0110	5	10	15
11	20241A0111	6	10	16
12	20241A0112	8	10	18
13	20241A0113	8	10	18
14	20241A0114	9	10	19
15	20241A0115	8	9	17
16	20241A0116	9	10	19
17	20241A0117	10	10	20
18	20241A0118	7	10	17
19	20241A0119	4	6	10
20	20241A0120	AB	AB	AB
21	20241A0121	7	10	17
22	20241A0122	9	10	19
23	20241A0123	8	10	18
24	20241A0124	8	10	18
25	20241A0125	8	10	18
26	20241A0126	7	10	17
27	20241A0127	9	10	19
28	20241A0128	7	10	17
29	20241A0129	7	10	17
30	20241A0130	4	10	14

31	20241A0131	9	10	19
32	20241A0132	10	10	20
33	20241A0133	8	10	18
34	20241A0134	8	10	18
35	20241A0135	5	10	15
36	20241A0136	9	10	19
37	20241A0137	10	10	20
38	20241A0138	10	10	20
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61	21245A0102	7	9	16
62	21245A0103	10	10	20
63	21245A0104	8	10	18
64	21245A0105	10	10	20

Signature of HOD
Date:

Signature of faculty
Date:

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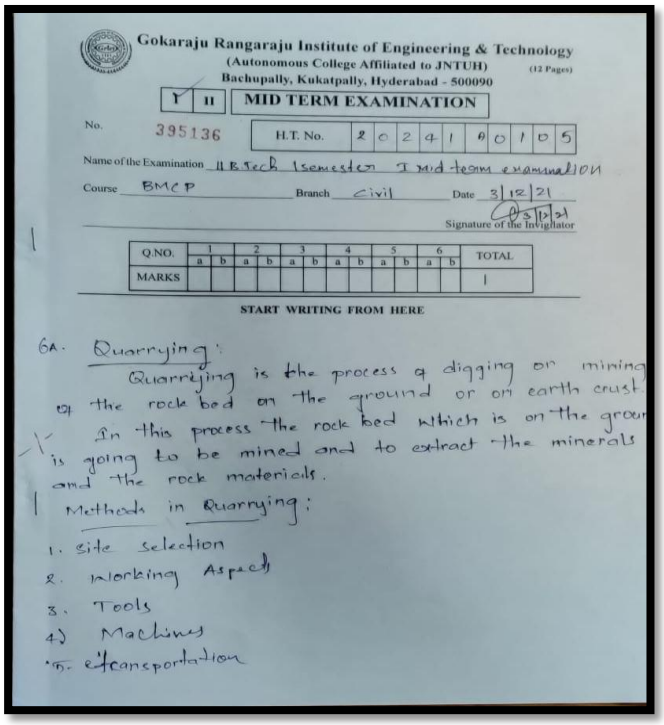
MID – 1

SAMPLE ANSWER SCRIPT



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I II MID TERM EXAMINATION

No. 395136 H.T. No. 2 0 2 4 1 A 0 1 0 5

Name of the Examination II B.Tech I semester I mid term examination

Course BMCP Branch Civil Date 3/12/21

Signature of the Invigilator 3/12/21

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

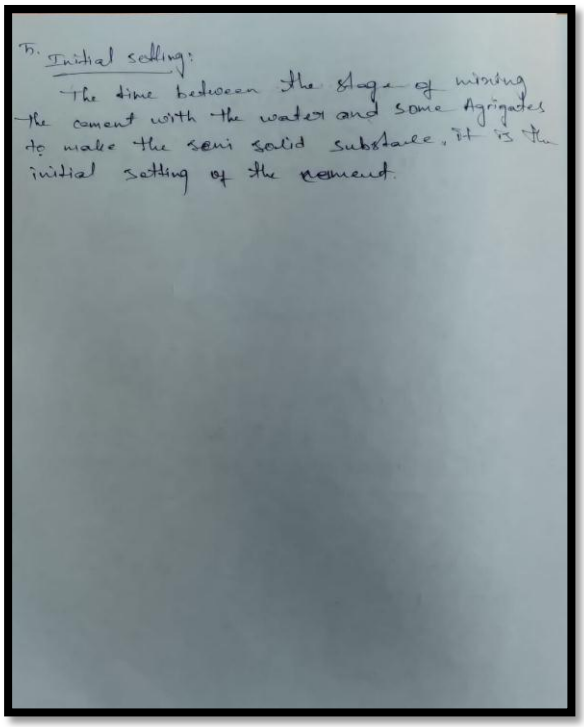
START WRITING FROM HERE

6A. Quarrying:

Quarrying is the process of digging or mining of the rock bed on the ground or on earth crust. In this process the rock bed which is on the ground is going to be mined and to extract the minerals and the rock materials.

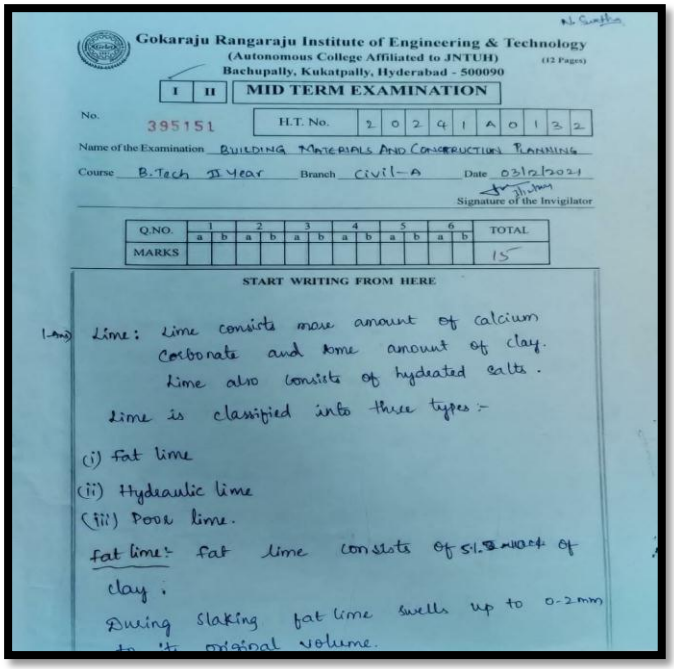
Methods in Quarrying:

1. Site selection
2. Working Aspect
3. Tools
4. Machines
5. Transportation



b. Initial setting:

The time between the stage of mixing the cement with the water and some Agrigates to make the semi solid substance, it is the initial setting of the cement.



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Bachupally, Kukatpally, Hyderabad - 500090

I II MID TERM EXAMINATION

No. 395151 H.T. No. 2 0 2 4 1 A 0 1 3 2

Name of the Examination BUILDING MATERIALS AND CONSTRUCTION PLANNING

Course B.Tech II Year Branch Civil-A Date 03/12/2021

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													15

START WRITING FROM HERE

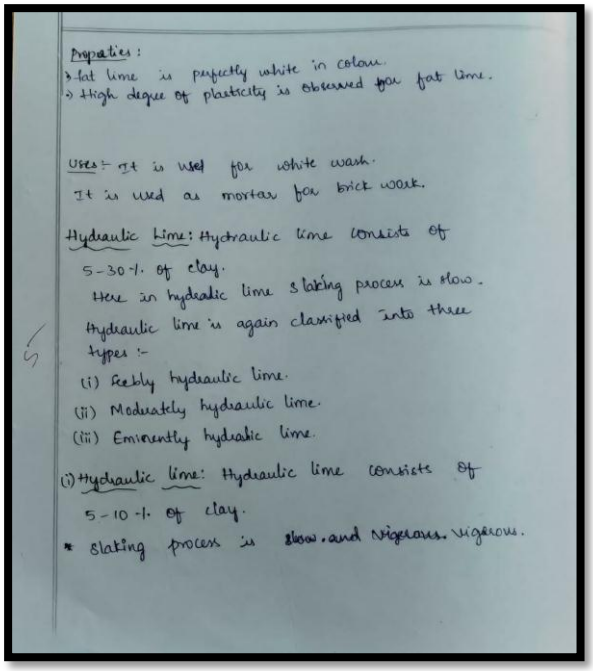
1.(a) Lime: Lime consists more amount of calcium carbonate and some amount of clay. Lime also consists of hydrated salts.

Lime is classified into three types:-

(i) fat lime
(ii) Hydraulic lime
(iii) Poor lime.

fat lime:- fat lime consists of 5-8% amount of clay.

During slaking fat lime swells up to 0-2 mm to its original volume.



Properties:

- fat lime is perfectly white in colour.
- High degree of plasticity is observed for fat lime.

Uses:- It is used for white wash.
It is used as mortar for brick work.

Hydraulic lime: Hydraulic lime consists of 5-30 % of clay.
Here in hydraulic lime slaking process is slow.
Hydraulic lime is again classified into three types:-

(i) Feebly hydraulic lime.
(ii) Moderately hydraulic lime.
(iii) Eminently hydraulic lime.

(i) Hydraulic lime: Hydraulic lime consists of 5-10 % of clay.
* Slaking process is slow and vigorous.

Moderately hydraulic lime:

Moderately hydraulic lime consists of 10 - 20 % of clay.

In this moderately hydraulic lime slaking process is slow moderate.

Feebly hydraulic lime:

Feebly hydraulic lime consists of 20-30 % of clay.

Slaking of this lime is a slow process. (Slaking (slow slaking is observed).

Hydraulic lime: when water is added to the Poor lime: lime hydration process is taken place and heat is released. In this process Alluminum Silicate and calcium Silicate chemically combine to for hydated salts. (These hydrocted salts)

Poor lime: Poor lime consists of very less more percent of clay, it, is about 60-70 % of clay. It is a low quality lime.

* Properties:

* Colour is dull

* binding is very less

* Quality is also less.

3) Manufacturing Process of Cement:

Cement: It is a composition of Argillaceous and Calcareous materials. It also consists lime. Cement is used for construction purposes etc.

Ingridients and their composition in cement.

Lime — 60-67 % (Strength)

* Silica — 17-25 % (Strength, Inc Initial setting time)

Alumina — 3-8 % (Strength).

Iron oxide — 0.5-5 %. (Colour)

Calcium Sulphate — 3-4 % (Strength, Initial setting time)

Alkali — 3-7 %. 0.1-0.2 %

Manufacturing of Cement includes these steps:-

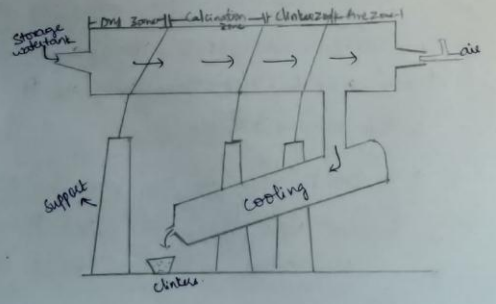
(i) Mixing

(ii) Burning

(iii) Grinding

Mixing: Here, in this process all the raw materials needed are mixed with water. Mixing is the first step for manufacturing of cement where all the needed ingredients are mixed properly. The ingredients are taken in a proper percentage of composition for further fine product. This will in the form of a paste.

Burning: Burning is taken place in a steel tube of 10-12 mts width and about 90-120 mts height. These steels tube is arranged inclinedly at about 1 in 15 to 1 in 20 degrees. This arrangement is called Rotary kiln.



In this rotary kiln burning is completed in four zones and then they are cooled and formed as clinkers.

Dry zone: Here in this zone, This dry zone is the upper inclination side of the steel tube in the Rotary kiln. Here the hydration process takes place. The water of slurry gets evaporated.

Calcination zone: In this calcination zone the unwanted carbondioxide (CO_2) is removed from the paste. of mixture.

Clinker zone: In this clinker zone. The temperature is increased upto 1100°c - 1300°c and here in this process greenish + blue colour balls are it attains glossy - vitreous nature.

Fire zone: : In this fire zone the temperature is increased upto 1100 - 1400 c and then greenish - blue colour balls are formed. called called clinkers.

These balls are called clinkers.

Then after the formation of clinkers. These clinkers are sent into another tube where cooling process takes place. After cooling the clinkers are collected and taken for further grinding process.

Grinding: These fine balls of clinkers are further ground using by heavy steel materials and formed into a fine powder. Gypsum is added to this powder to increase initial setting time for about 30 min. It is corrected and stored in packets.

wet process

6) Quarrying: Extracting minerals from the rock bed is generally termed as Quarrying. By Quarrying is done for extracting Granite, & etc.

Methods of Quarrying:

1. Man power Quarrying
2. Machinery Quarrying
3. Blasting Quarrying.

Man power Quarrying: In this Quarrying is done by the help of the laborers or workers. Some of the tools used are chisel, axe and crowbars etc. It will be economically helpful but time taking process.

Machinery Quarrying:

In this machinery quarrying different machines are used for cutting rock. A big rock is cutt into small slabs or blocks using a machine and with help of water.

Blast Quarrying: This type of quarrying is done in 3 steps

(i) Boring holes (ii) Filling holes with explosives and (iii) Tamping. Tampering

First at the soft rock areas hole is dug for about 10 - 12 cm and depth of 2cm height then it is cleaned by using air.

By using air pressure all the powder in it is taken out.

Filling with explosives:

Now the bore holes are filled with the explosives like gun powder, kepon. Then they are closed with clay filled completely. So that they explode and break the rock into small blocks.

Tampering: Here in this process the only hole is closed so tho with clay and pressed hardly. So that the bomb explodes in all the directions for better quarrying. Rocks are large even after this then they are again blasted for small blocks.

Signature of HOD

Signature of faculty

Date:

Date:

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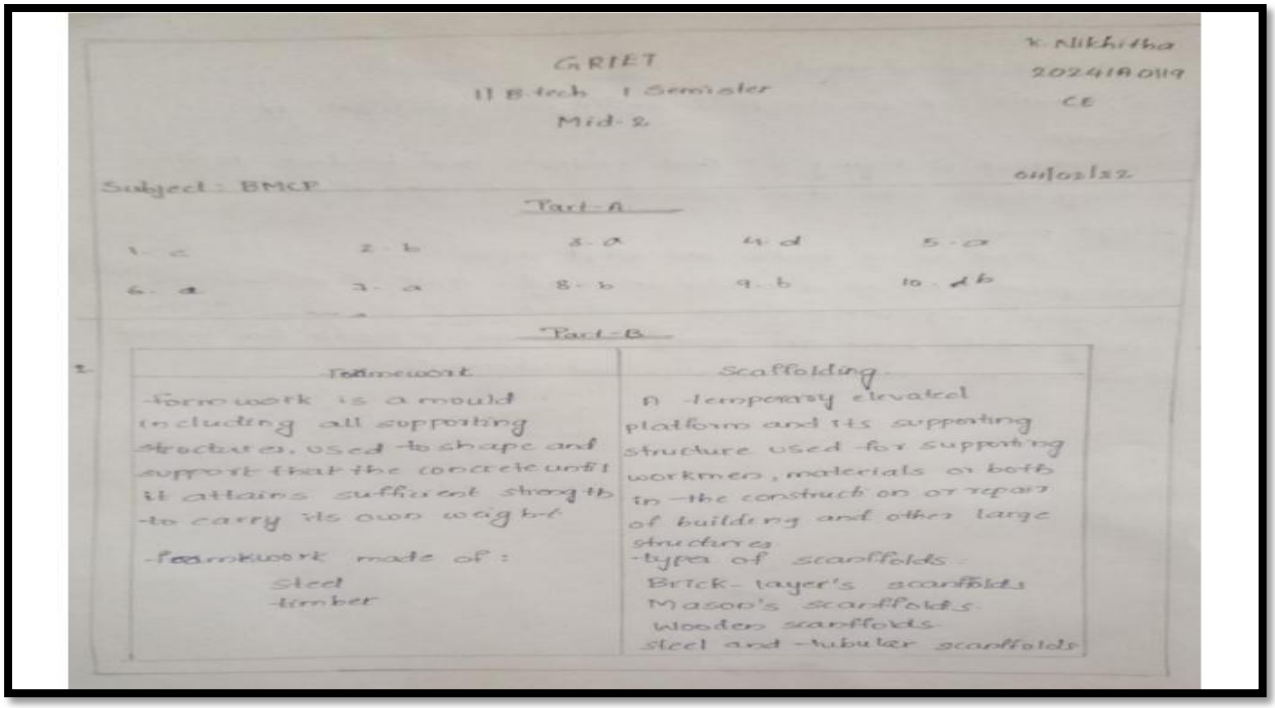
MID – II

SAMPLE ANSWER SCRIPT



GRIET
II B.Tech I Semester
Mid-2

Y. Nikhitha
2024IA0119
CE

Subject: BMCP 01/02/22

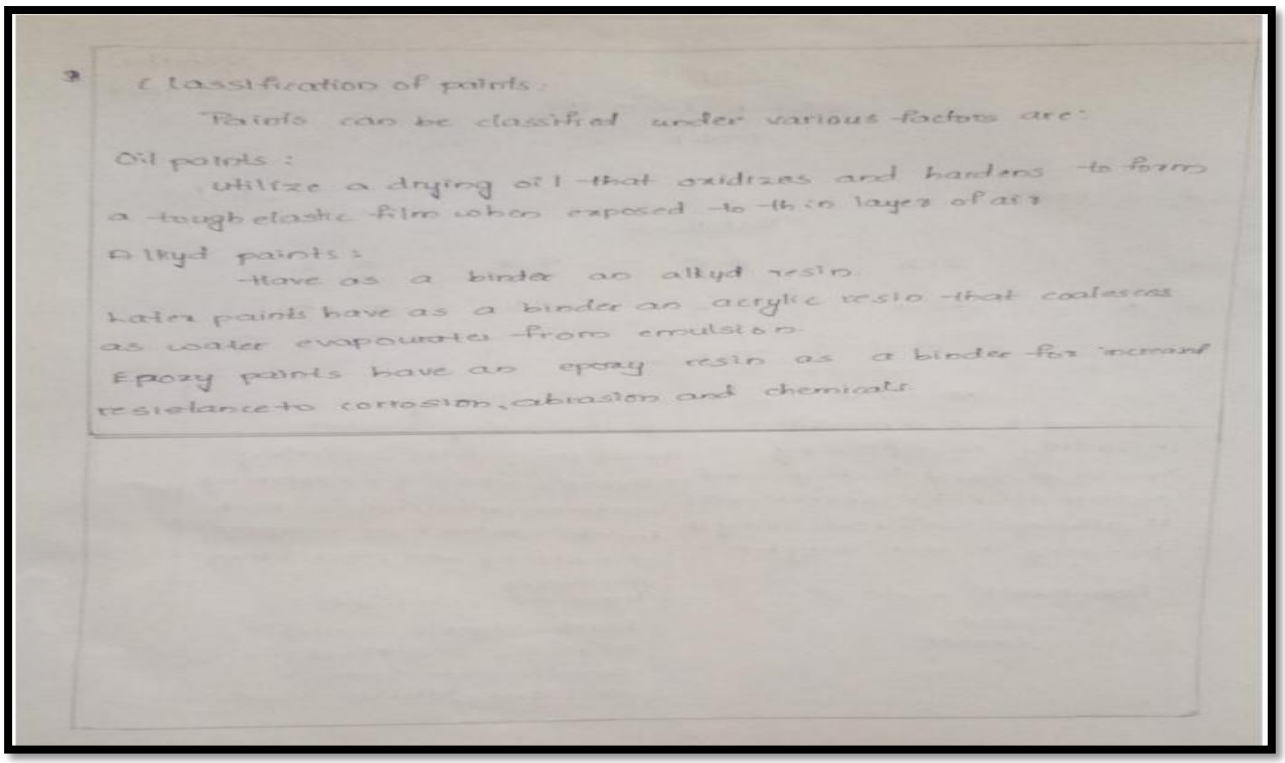
Part-A

1. c 2. b 3. a 4. d 5. a
6. a 7. a 8. b 9. b 10. b

Part-B

2.

Formework	Scaffolding
-formwork is a mould including all supporting structures, used to shape and support that the concrete until it attains sufficient strength to carry its own weight -formwork made of: steel timber	A temporary elevated platform and its supporting structure used for supporting workmen, materials or both in the construction or repair of building and other large structures -types of scaffolds Brick-layer's scaffolds Mason's scaffolds Wooden scaffolds steel and tubular scaffolds



3. Classification of paints:

Paints can be classified under various factors are:

Oil paints:
utilize a drying oil that oxidizes and hardens to form a tough elastic film when exposed to thin layers of air

Alkyd paints:
-Have as a binder an alkyd resin

Latex paints have as a binder an acrylic resin that coalesces as water evapourates from emulsion

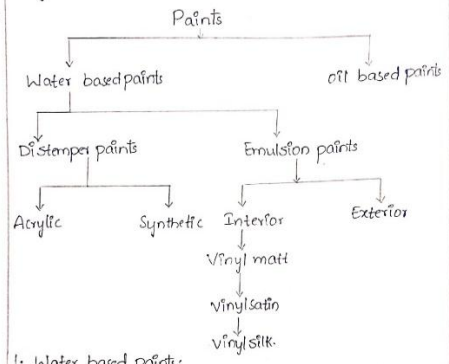
Epoxy paints have an epoxy resin as a binder for increased resistance to corrosion, abrasion and chemicals

II B.Tech Mid II Examination, DT: 04-2-22 P Mouna
Sub: Building Materials & Construction Planning 2124SA0105

Objective
1. B 2. B 3. A 4. D 5. A 6. C 7. A 8. C 9. A 10. B

Subjective.

1.



1. Water based paints:
→ It is a mixer of pigments, Binder, drier and mainly water
→ The majority of wall paint sold today is water-based.

i) Distemper: Distemper paint is an ancient type of paint made of water chalk and pigment, bound with either an animal glue or the adhesive.
a) Acrylic distemper: It is acrylic distemper of the highest quality and gives the wall a delightful smooth matte finish. High-finishing distemper.
Brands: Asian paints, Berger etc.
b) Synthetic distemper: Synthetic distemper is water based finish value for money distemper. Low finish in Distemper.
Brands: Asian paints, Berger etc.
ii) Emulsion: These are superior quality of paints formed by mixing oil/water and an emulsifying agent to prevent the seperation of the combination.
a) Interior Emulsion paints:
→ Vinyl matt (non-shiny finish)
→ Vinyl satin (Soft-sheen finish)
→ Vinyl silk (High-sheen finish)
b) Exterior Emulsion paints: It is a smooth water-based, Modified acrylic, exterior wall finish with silicon additives.
2. Oil based paints:
→ oil based paint is more durable, but it takes longer to dry and cleanup requires turpentine

oil or paint thinner for its application.
→ Oil based paints are made with either synthetic or natural oils
→ Oil based paints are durable but it changes its original colour after the year passes.
→ Generally termed as Enamel paints which comes under different varied colours.
→ Oil based paints comes in three finishes i.e High gloss, Satin and matt

2.

Formwork	Scaffolding
1. Formwork is arranged to support the structural members	1. Scaffolding is provided as a workers platform around the building to work at heights.
2. They can be made from Wood, plywood, steel, Combined wood-steel, Reinforced concrete and plain Concrete.	2. They can be made from timber, steel, and aluminium.
3. used as a mould to Construct Concrete columns, beams, slabs and so on.	3. Around the building or structure to perform various works like painting, White washing, plastering, and so on.
4. They should be removed after 36 hours or 6 days or 28 days depending	4. They can be removed as soon as the work is completed.

Upon the type of formwork	
5. Formwork tends to be perform in small chunks, to create one column, or one horizontal slab at a time.	5. Scaffolding tends to be used to make bigger platforms to allow tradespeople to do their jobes
6. Formwork needs to be Strong and durable	6. Scaffolding on the other hand, is designed to be lighter and more Mobile, while still being strong.

Signature of HOD

Signature of faculty

Date:

Date: