

Lesson Plan- CE1007- Construction Technology
Academic year 2015-16
(Semester commencing in June 2015)

Instructional objectives no.	Instructional objectives (IO)
1	To build an awareness about the type of masonry, floors, and roofs
2	To understand types of doors and stairs and its uses
3	To know about the supporting structures and building amenities

Student outcomes

Student outcome number	Student outcome (SO)
a	an ability to apply knowledge of mathematics, science, and engineering
d	an ability to function on multidisciplinary teams
k	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Mapping of Instructional Objectives (IOs) with Student Outcomes (SOs)
CE1007- Construction Technology

Instructional objectives		Student Outcomes			
		a	d	k	
1. To build an awareness about the type of masonry, floors, and roofs		X	X	X	
2. To understand types of doors and stairs and its uses		X	X	X	
3. To know about the supporting structures and building amenities		X	X	X	
CE1007	Structural Design (Masonry and RCC)	Lecture Hours (L)	Tutorial Hours (T)	Practical Hours (P)	Credits (C)
		3	0	0	3
	Prerequisites Nil				

Lesson Plan – 2015-16

Revision: 0 dated 10/01/2015

Lecture No.	Topic	No. of hours	IOs	SO	Reference
1.	Introduction-overview of syllabus	1	3	a, d, k	1,2,3,4,5,6
UNIT-I GENERAL					
2.	Principles of Planning	1	3	a, d	1,2,3,4,5,6
3.	Planning Regulations and Byelaws	1	3	a, d	1,2,3,4,5,6
4.	Housing Analysis	1	3	a, d	1,2,3,4,5,6
5.	Role and Uses of Computers in Planning	1	3	a, d	1,2,3,4,5,6
6.	Orientation of Building	1	3	a, d	1,2,3,4,5,6
7.	Functional Requirements of a Building	2	3	a, d	1,2,3,4,5,6
8.	Types of Plans	1	3	a, d	1,2,3,4,5,6
UNIT-II MASONRY					
9.	Masonry , Stone Masonry, Rubble and Ashlar Masonry	2	1	a, d, k	1,2,3,4,5,6
10.	Brick Masonry - Bond Types of bonds- English and Flemish bond	2	1	a, d, k	1,2,3,4,5,6
Cycle Test - I					
11.	Composite masonry, Stone masonry	2	1	a, d, k	1,2,3,4,5,6
12.	Concrete Masonry, Reinforced masonry	1	1	a, d, k	1,2,3,4,5,6
13.	Types of walls	1	1	a, d, k	1,2,3,4,5,6
14.	Types of Partition walls	1	1	a, d, k	1,2,3,4,5,6
UNIT-III FLOORS AND ROOFS					
15.	Floors, Types of floor	1	1	a, d, k	1,2,3,4,5,6
16.	Details of concrete and Terrazzo floors	1	1	a, d, k	1,2,3,4,5,6
17.	Roofs, Types of Roofs	1	1	a, d, k	1,2,3,4,5,6
18.	Types of Roofs , Flat roofs, Sloping roofs, Shell Roofs	1	1	a, d, k	1,2,3,4,5,6
19.	Roof coverings, AC sheets, GI sheets	1	1	a, d, k	1,2,3,4,5,6
20.	Lintels , Classification of lintels	1	1, 3	a, d, k	1,2,3,4,5,6
21.	Arches, Classification of arches	1	1, 3	a, d, k	1,2,3,4,5,6
22.	Types of weathering courses	1	1, 3	a, d, k	1,2,3,4,5,6
23.	Damp proofing, Methods of damp proofing	1	1, 3	a, d, k	1,2,3,4,5,6

Lecture No.	Topic	No. of hours	IOs	SO	Reference
UNIT-IV STAIRS AND SUPPORTING STRUCTURE					
24.	Staircase, Types of staircase	1	2, 3	a, d, k	1,2,3,4,5,6
25.	Types of doors and windows, Wooden and metallic door frames	2	2, 3	a, d, k	1,2,3,4,5,6
	Cycle Test - II	2			
26.	Ventilators	1	2, 3	a, d, k	1,2,3,4,5,6
27.	Fixtures and fastening for doors and windows	1	2, 3	a, d, k	1,2,3,4,5,6
28.	Shoring and its types, Underpinning and its types	2	2, 3	a, d, k	1,2,3,4,5,6
29.	Scaffolding, Components, Types	1	2, 3	a, d, k	1,2,3,4,5,6
30.	Form work, Form work for columns, beam, stairs, walls	1	2, 3	a, d, k	1,2,3,4,5,6
UNIT-V BUILDING AMENITIES					
31.	Thermal insulation, Heat transference	1	3	a, k	1,2,3,4,5,6
32.	Insulating material, Method of application	1	3	a, k	1,2,3,4,5,6
33.	Ventilation, Requirements, Types of ventilation	2	3	a, k	1,2,3,4,5,6
34.	Air conditioning	1	3	a, k	1,2,3,4,5,6
35.	Fire proof construction methods, Fire alarms	2	3	a, k	1,2,3,4,5,6
36.	Principles of acoustical design of building, Sound insulation, materials and methods	2	3	a, k	1,2,3,4,5,6
	Model Examination	3			
	Total hours	45			

The faculty members handling the course may conduct surprise test according to their convenience. However a question paper in hard copy as well as key shall be made available for the surprise test. The process shall be same as that of cycle tests.

TEXT BOOKS

1. Varghese .P.C, " Building Construction", Prentice Hall India, 2007.
2. Arora and Bindra .S.P, "Building Construction, Planning Techniques and Method of Construction", Dhampatrai sons, New Delhi, 2008.
3. Punmia B.K., Ashok Kumar Jain, Arn Kumar Jain, "Building Construction", Laxmi Publications Pvt. Ltd., New Delhi, 2008.

REFERENCE BOOKS

4. National Building Code, Bureau of Indian Standards, New Delhi, 2005.
5. Chudley. R, Construction Technology, ELBS Publishers, 2007.
6. Gurucharan Singh, "Building Construction and Materials", Standard Book House, Delhi, 2008.

Course Coordinator

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