GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. - SEMESTER – IV • EXAMINATION – WINTER 2012

Date: 28/12/2012

Subject code: 140602

Subject Name: Building Construction			
Time: 02.30 pm - 05.00 pm Total Marks: 70			
Inst	truci	tions:	
	1.	Attempt any five questions.	
	2.	Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
Q.1	(a)	What are the purposes of sub-soil exploration? Explain in brief, following	07
		methods of site exploration: (i) Auger boring, (ii) Wash boring.	
	(b)	What are the causes of failure of foundation? What remedial measures would you adopt?	07
Q.2	(a)	What is bond in brick masonry? What is its significance? What are the rules for	07
	(4)	bonding?	0,
	(b)	Explain with sketch Plate Load Bearing Test.	07
	(~)	OR	٠.
	(b)	What are the problems of foundations on black cotton soils? Explain with sketch Under-reamed pile foundation.	07
Q.3	(a)	Describe with neat sketch different types of rubble masonry.	07
	(b)	Explain with sketches the details of cavity wall at the following locations: (a)	07
	()	Foundation level, (b) Parapet level, (c) At openings.	
		OR	
Q.3	(a)	Distinguish between lintel & an arch. Draw a neat sketch of an arch and show on it various technical terms used in its construction.	07
	(b)	Explain with sketches the following types of stairs:	07
		(1) Open well stair (Half& Quarter turn), (2) Bifurcated stairs, (3) Spiral stairs.	
Q.4	(a)	Explain in brief the essential requirements of a floor. Describe the following with sketches & mention the situations under which they are used? (a) Reinforced brick flooring, (b) Ribbed floor.	07
	(b)	What are the essential requirements of a good roof? Compare merits &	07
	()	demerits of flat & pitched roof?	
		OR	
Q.4	(a)	Explain the methods of mixing, placing, compacting and curing of concrete.	07
	(b)	What is the importance of reinforcement in concrete? Describe various types of	07
	()	reinforcements used in reinforced concrete.	
Q.5	(a)	What are the points to be kept in view, while locating doors & windows in a	07
	()	room? Explain with sketches: (1) Revolving door, (2) Dormer window.	
	(b)	What are the objects of plastering? Describe in brief: (i) Cement Plastering, (ii)	07
	` ,	Acoustical plaster.	
		OR	
Q.5	(a)	What do you understand by under-pinning? When do you require it? Explain with sketches its method.	07
	(b)	Briefly explain: (i) Thermal insulation of exposed walls, (ii) Post-construction	07
	(0)	anti-termite treatment.	07
