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Code No. : 14148

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD*Accredited by NAAC with A++ Grade***B.E. (Civil Engg.) IV-Semester Main & Backlog Examinations, August-2022****Building Materials and Construction**

Time: 3 hours

Max. Marks: 60

*Note: Answer all questions from Part-A and any FIVE from Part-B***Part-A (10 × 2 = 20 Marks)**

Q. No.	Stem of the question	M	L	CO	PO
1.	Distinguish a load bearing structure and framed structure.	2	1	1	1
2.	Give the classification of buildings as per National Building Code.	2	1	1	1,6
3.	State the characteristics of good building stone.	2	1	2	1
4.	What is the composition of brick clay?	2	1	2	1
5.	What are the factors affecting workability of concrete?	2	1	3	1,6,7
6.	List the various types of cement.	2	1	3	1
7.	What are the functions of varnishes ? List the various types of varnishes.	2	2	4	1
8.	What is the utility of flyash and GGBS in building construction?	2	2	4	1,6,7
9.	Define tread and rise. What are the dimensions specifications for tread and rise.	2	1	5	1
10.	Differentiate between English bond and Flemish bond.	2	1	5	1
Part-B (5 × 8 = 40 Marks)					
11. a)	Explain orientation of a building and different factors which affect the orientation. Give some suggestions for the optimum orientation for a residential building in a tropical country like India.	4	3	1	1,6,7
b)	What are the recommended aspect for planning various rooms in a building? Also, explain the influencing factor for recommending such aspect for that room.	4	3	1	1,6,7
12. a)	What is the importance of seasoning of timber? Explain various methods of seasoning of timber.	4	2	2	1
b)	Present the characteristics of various types of bricks used in buildings	4	2	2	1

13. a)	What do you understand by bulking of sand? How does it affect quantity of sand by volume batching?	4	2	3	1,6
b)	Explain the dry process method for manufacture of cement with a neat sketch.	4	2	3	1
14. a)	What are the causes and effects of dampness in buildings? Explain various methods of damp proofing.	4	3	4	1,6
b)	What is the need of eco friendly and sustainable building materials? Explain the characteristics of any two such materials.	4	3	4	1,6,7
15. a)	What are the components of rain water harvesting system? Explain various methods of rain water harvesting systems.	4	3	5	1,6,7
b)	Explain the terms of scaffolding and formwork. Also, present the various types of scaffolding and formwork used for construction with their salient features.	4	3	5	1
16. a)	What are the provisions for physically handicapped facilities? Present the standard IS specifications.	4	3	1	1,6
b)	Describe in detail the geological classification of rocks	4	2	2	1
17.	Answer any <i>two</i> of the following:				
a)	Proportion of cement mortars and its uses.	4	2	3	1
b)	Constituents of paint and their functions.	4	2	4	1
c)	Green building certification systems.	4	3	5	1,6,7, 12

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	40%
iii)	Blooms Taxonomy Level – 3 & 4	40%
