

Hall Ticket Number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Code No. : 14168 O

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD**

Accredited by NAAC with A++ Grade

**B.E. (Civil Engg.) IV-Semester Backlog Examinations, July/August-2023**

**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.	List any two provisions provided for physically handicapped in buildings.	2	1	1	1,6
2.	What are setbacks? Present the guidelines provided for setbacks as per NBC 2016 for residential buildings.	2	1	1	1,6
3.	What is the range of temperature at which clay should be heated to form brick? What happens if you provide more temperature to clay?	2	2	2	1
4.	List the major types of reinforcing steel used in building construction.	2	1	2	1
5.	What are Bogues compounds? List them.	2	1	3	1
6.	Differentiate between coarse aggregate and fine aggregate.	2	1	3	1
7.	Where can flyash, GGBS and recycled materials used in building construction? List any two advantages of using the above materials.	2	2	4	1,6,7
8.	What are the advantages of AAC blocks?	2	1	4	1,6,7
9.	What are the various parts of a staircase? Draw a sketch of a simple dog legged staircase and represent the parts on it.	2	1	5	1
10.	Differentiate between direct and indirect water supply system.	2	1	5	1
<b>Part-B (5 × 8 = 40 Marks)</b>					
11. a)	Explain the principles of building planning.	4	2	1	1,6,7
b)	What are the basic building elements? Mention the purpose of the building elements.	4	2	1	1,6
12. a)	What are the desirable characteristics of good building stones and bricks? Also, present the IS classification of bricks explaining the use of each type of brick in construction.	4	2	2	1,6
b)	How can timber be promoted as a sustainable material? What are the objectives of seasoning of timber? Explain briefly the methods of seasoning of timber.	4	3	2	1,6,7
13. a)	What is workability of concrete? On what factors does workability of concrete depends? Explain the methods for measurement of workability of concrete?	4	3	3	1

Contd... 2

	b)	Describe the dry process of manufacturing of cement with the aid of "Flow diagram".	4	2	3	1
14.	a)	What is dampness in building? Discuss its possible causes and effects on the performance of building structure. Explain the various methods of damp proofing.	4	2	4	1,6
	b)	What are paints? What are constituents in paints? Briefly outline various types of paints and its uses.	4	2	4	1
15.	a)	Which bond consists of alternative courses of headers and stretchers? Draw elevation and isometric view of the above bond for 1 ½ brick wall showing atleast four courses in the figure.	4	3	5	1
	b)	Describe a case study of a green building in India which is either GRIHA or LEED certified.	4	3	5	1,6,7
16.	a)	Explain the factors considered in site selection of buildings with neat sketches.	4	2	1	1,6,7
	b)	What are the various types of plywood and laminates? Mention their uses.	4	3	2	1
17.		Answer any <i>two</i> of the following:				
	a)	Bulking of sand.	4	3	3	1
	b)	Constituents of varnishes and types of varnishes.	4	3	4	1
	c)	Provisions of rain water harvesting in buildings.	4	3	5	1,6,7

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%

\*\*\*\*\*