

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

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Fifth Semester B.E. Degree Examinations, April/May 2024

PREFABRICATED STRUCTURES

Duration: 3 hrs

Max. Marks: 100

Note: 1. Answer any FIVE full questions choosing ONE full Question from each Module.
2. Missing data, if any, may be suitably assumed.

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBT:CO: PI)</u>
<u>Module-1</u>			
1.	a. Define prefabrication and briefly explain the uses of prefabrication technique.	10	(2 :1: 1.2.1)
	b. Briefly explain the principles of prefabrication technique.	10	(2 :1: 1.2.1)
(OR)			
2.	a. Briefly explain advantages and disadvantages of prefabrication technique.	10	(2 :1: 1.2.1)
	b. Define modular coordination and explain the concept of modular coordination in prefabrication.	10	(2 :1: 1.2.1)
<u>Module-2</u>			
3.	a. Briefly explain the behaviour of structural components in prefabrication.	10	(2 :2: 1.2.1)
	b. Explain in detail about classification of large panel construction.	10	(2 :2: 1.2.1)
(OR)			
4.	a. Explain the construction of roof and floor slab in pre-fabricated structures.	10	(2 :2: 1.2.1)
	b. Define shear wall and explain the importance of shear wall in prefabricated structures.	10	(2 :2: 1.2.1)
<u>Module-3</u>			
5.	a. Briefly explain disuniting of structures.	10	(2 :3: 1.2.1)
	b. Explain the advantages and disadvantages of disuniting of structures.	10	(2 :3: 1.2.1)
(OR)			
6.	a. Explain design of cross section based on efficiency of materials used in prefabrication with neat sketches.	10	(2 :3: 1.2.1)
	b. Explain in detail about allowance for joint deformation.	10	(2 :3: 1.2.1)
<u>Module-4</u>			
7.	a. Explain the essential requirements of joints in pre cast structures.	10	(2 :4: 1.2.1)
	b. Explain dry joint and wet joint in detail.	10	(2 :4: 1.2.1)

Note: (RBT: - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI- Performance Indicator)

(OR)

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| 8. | a. Define expansion joint and briefly explain the design of expansion joint in pre-cast structure. | 10 | (2 :4: 1.2.1) |
| | b. Explain problems involved in design of joint flexibility. | 10 | (2 :4: 1.2.1) |

Module-5

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| 9. | a. Define abnormal loads and explain the causes of progressive collapse. | 10 | (2 :5: 1.2.1) |
| | b. Explain in detail about the codal provisions for progressive collapse | 10 | (2 :5: 1.2.1) |

(OR)

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| 10 | a. Explain the procedure to calculate equivalent design loads when the structure is subjected to earth quake loads. | 10 | (2 :5: 1.2.1) |
| | b. Define progressive collapse. What are the requirements to increase the resistance to progressive collapse? | 10 | (2 :5: 1.2.1) |

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