

Roll No. ....

Total Pages : 3

**002304**

**December 2023**

**B.Tech. (Civil) III SEMESTER**

**Building Materials and Testing (PCC-CED-203)**

Time : 3 Hours]

[Max. Marks : 75

*Instructions :*

1. It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.
2. Answer any four questions from Part-B in detail.
3. Different sub-parts of a question are to be attempted adjacent to each other.

**PART-A**

1. (a) Define bulking of sand. (1.5)  
(b) What is frog in a brick? (1.5)  
(c) What is initial and final setting time of cement? (1.5)  
(d) What is fly ash? Discuss its applications. (1.5)  
(e) What is ready mix concrete? Discuss its uses. (1.5)  
(f) What is NDT? (1.5)  
(g) Discuss the uses of paints. (1.5)  
(h) State any two characteristics of good building stone. (1.5)

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- (i) List any four construction materials used in building construction. (1.5)
- (j) What do you mean by eco-friendly building materials? Give examples. (1.5)

**PART-B**

- 2. (a) Elaborate on different types of bricks. Also, discuss the different characteristics of good building bricks. (10)
- (b) Differentiate between cavity & partition walls. (5)
- 3. (a) Elaborate on different types of defects in timber. (5)
- (b) Elaborate on different types of foundations along with suitable diagrams. (10)
- 4. (a) Elaborate on different types of cement along with their applications. (5)
- (b) Discuss the different types of brick masonry bonds. (10)
- 5. (a) Differentiate between coarse & fine aggregates. (5)
- (b) Discuss any three tests to evaluate the quality of concrete. (10)
- 6. (a) Differentiate between concrete and mortar. Elaborate on different uses of concrete and mortar. (10)

- (b) Discuss the characteristics of good aggregates. (5)
- 7. (a) What is workability of concrete? Discuss the different factors affecting it. (5)
- (b) Describe the selection criteria for selecting stone for face work of building. (10)

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