

**FACULTY OF ENGINEERING**  
**B.E. 2/4 (Civil) I - Semester (Suppl.) Examination, July 2014**

**Subject : Engineering Materials and Construction**

**Time : 3 Hours**

**Max. Marks: 75**

**Note: Answer all questions of Part - A and answer any five questions from Part-B.**

**PART – A (25 Marks)**

- 1 Why bricks are wetted before use and why are they placed in such a way that their frog should be upward? (3)
- 2 Where would you recommend coursed rubble masonry and random rubble masonry? (2)
- 3 List out the various characteristics of good mortar sand. (2)
- 4 Define bulking of sand and explain. (3)
- 5 What is the function of sand in mortar? (2)
- 6 How the reinforced steel is stored and handled? (3)
- 7 What are the advantages of recycled materials? (2)
- 8 Write a short note on energy conservation in buildings. (3)
- 9 List out the different types of floors. (3)
- 10 Differentiate plastering and pointing. (2)

**PART – B (50 Marks)**

- 11 Give a list of at least five different stones which are used for building works. Explain their properties, mode of formation and origin. Where these stones are found in India? (10)
- 12 (a) What are the standard sizes of bricks and their weights? How many bricks will be required for 1m<sup>3</sup> of brick masonry. (4)  
 (b) What are the characteristics of good brick? How you will ascertain that the bricks received by you are of good quality? (6)
- 13 (a) What are the principal components of Portland Cement? (3)  
 (b) Explain in detail the manufacturing process of Cement. (7)
- 14 Why curing is required for concrete? Explain the different methods of curing concrete (10)
- 15 (a) What do you understand by the term decay of timber? (3)  
 (b) List out the common diseases in timber? What are their causes and what preventive measures do you suggest? (7)
- 16 (a) Explain the method of constructing of concrete and marble flooring. (4)  
 (b) What are scaffoldings? Explain the different types of scaffolding with neat sketches. (6)
- 17 Write short notes on : (10)
  - (a) Load bearing and non-load bearing wall
  - (b) Tests on aggregates
  - (c) Types of reinforcement steel

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