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Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(CE) (2011 Onwards) (Sem.-3)**  
**BUILDING MATERIALS & CONSTRUCTION**  
Subject Code : BTCE-305  
Paper ID : [A1117]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION A****1. Write briefly :**

- a) What are the major classifications of stones? Give 2 examples in each.
  - b) What are artificial stones?
  - c) Differentiate between Portland Cement and white cement.
  - d) Describe two field tests to evaluate the quality of cement supplied to the site.
  - e) Differentiate between paints and varnishes.
  - f) What is the significance of bonding in brickwork?
  - g) Distinguish between white washing and distempering.
  - h) Define Glass flooring. What are the situations in which it is used?
  - i) What is the purpose of providing traps in house plumbing?
  - j) List **two** methods of providing acoustics and insulation in buildings.
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**SECTION B**

2. What properties you would consider in choosing stone for building construction in an industrial area subject to heavy rains? Name types of stones which you consider preferable?
3. List the various tests you would like to perform on building bricks. Describe the test for water absorption indicating the standards.
4. What is meant by workability of concrete? What are factors affecting workability?
5. What are the advantageous and disadvantageous of concrete block masonry over brick masonry?
6. Describe methods of damp prevention along parapets.

**SECTION C**

7. A bungalow with open verandah and flat roof is to be constructed in Punjab. Write briefly about the materials constructions you specify for the following parts of the building giving reasons for your choice :
    - (a) Foundation
    - (b) Superstructure masonry with pillar
    - (c) Lintel
    - (d) Roof
    - (e) Floor
  8. What are the major types of foundations used in buildings? Sketch and explain their suitability.
  9. Describe the importance of the following in RCC work :
    - (a) Water Cement Ratio
    - (b) Compaction of concrete
    - (c) Curing of the Concrete
    - (d) Strength of concrete
    - (e) Bulking of Sand
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