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Total No. of Pages: 02
Total No. of Questions: 09

B.TECH (CE) (Sem.-3rd)
BUILDING MATERIALS & CONSTRUCTION
Subject Code: BTCE-305
Paper ID: [A1117]

Time: 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATE:

- (i) Section –A, is Compulsory.
- (ii) Attempt any four questions from Section-B.
- (iii) Attempt any two questions from Section-C.

Section –A

- Q.1.(a)** Distinguish between sedimentary and metamorphic rocks. Give 2 examples in each.
- (b) What is meant by Natural bed in stones?
 - (c) Differentiate between Portland Cement and white cement.
 - (d) What are the precautions to be taken while storing cement?
 - (e) What are the major ingredients of Paint? Give the role of each ingredient.
 - (f) Differentiate between Headers and Stretchers in brick bonds.
 - (g) List any four qualities of good timber.
 - (h) List any four defects in plastering
 - (i) What is the purpose of providing traps in house plumbing?
 - (j) List two methods of providing acoustics and insulation in buildings.

Section –B

- Q.2.** Describe the classification of Bricks as per Indian standards. How do they compare on their properties?
- Q.3.** What is meant by soundness of cement? Explain the procedure of testing soundness.
- Q.4.** What are factors affecting workability of concrete? Explain the methods to determine workability.
- Q.5.** What are the advantageous and disadvantageous of concrete block masonry over brick masonry?

Q.6. What do you understand by the term comfort zone? What is its importance in air conditioning system design?

Section –C

Q.7. A two storied bungalow with open verandah and flat roof is to be constructed in Punjab. Briefly describe type of construction and materials for roofs and floors you will propose. Discuss the various damp proof systems you suggest. Also, give the major considerations which are to be made in providing Plumbing and electrical services in the building.

Q.8. What are the major types of foundations used in buildings? Sketch and explain their suitability.

Q.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) Bleeding of Concrete.

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