Dr Poonam

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
MID SEMESTER EXAMINATION - 2015
B.Tech. 2nd Semester, Civil Engineering

COURSE CODE: **11B11CE211** MAX. MARKS: 30
COURSE NAME: Building Materials and Construction MAX. TIME: 2 HRS
COURSE CREDITS: 04

NOTE: All questions are compulsory. Write concisely.

Section-A (12 × 0.5 mark = 6 marks)

Q.1. (a) Suggest remedy for dry and wet rotting of timber.

(b) Are the hollow and perforated bricks the same? If yes / no, justify.

(c) A piece of timber is labeled as BAL, elaborate this labeling.

(d) Differentiate dry mix and wet mix procedures of cement manufacturing.

(e) Discuss engineering advantage of natural bed of stones.

(f) Why is Smith's test conducted on stones to be used for construction works?

(g) How are siliceous and argillaceous rocks different from each other?

(h) Suggest a remedy for wall delamination in case of stone masonry.

(i) What grades of cements are available in India and what are their respective IS codes?

(j) How much gypsum is added to clinkers and what is advantage of adding it?

(k) Suggest remedy for prevention of efflorescence in brick masonry.

(l) For first-class bricks, what are the standard value for water absorption and crushing strength?

Section B (3 × 3 marks = 9 marks)

Q.2. Discuss, in detail, the three stages of burning of bricks.

Q.3. Discuss components of a trunk of a tree, and their functions. Draw the labeled diagram of cross-section of tree showing all the components.

Q.4. Explain the wedging process of quarrying of stones in detail with labeled diagrams.

Section C (3 × 5 marks = 15 marks)

Q.5. What are the constituents of cement? Give their respective ratios and functions in cement?

Q.6. How does water react with cement? Discuss in detail the hydration process of cement. Which compound is responsible for bonding of cement with aggregate?

Q.7. Draw a typical section of stone masonry wall for a two-storey house with door and window openings.

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