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BARCH
(SEM I) THEORY EXAMINATION 2018-19
Construction & Materials-I

Time: 3 Hours

Total Marks: 100

- Notes:** 1. Attempt all Sections. If require any missing data; then choose suitably.
2. Make neat sketches with support answer.

SECTION A

1. Answer **any five** from the following supported with neat sketches. **(5x2=10)**
- a) Staircase
 - b) Any two tools/ Equipment used for making brick wall
 - c) Mumty
 - d) Parapet
 - e) Half Bat
 - f) Sill
 - g) Railing
 - h) Lintel

SECTION B

2. Attempt **any Three** of the following with neat sketches. **(3x5=15)**
- a) Discuss, in detail the importance of various constituents used for the manufacturing of any one of the following:
 - i) Portland Cement
 - ii) Brick
 - b) During construction of a residence where you use the following: (Any Two)
 - i) Fine Sand
 - ii) Cement Mortar
 - iii) Brick Blast
 - c) Differentiate between English Bond and Flemish Bond? Draw/ sketch isometric view of the following bricks
 - i) King closer ii) Queen Closer
 - d) Why bonding is needed to be broken at every course in brick masonry? What are the variations used in masonry bonds?
 - e) List down in Detail any two-test used for Checking of Cement?
 - f) What is lime? Differentiate between Fat and Hydraulic lime?
 - g) What is Mortar? List Down the Properties of Mortar? what are the precautions been used in using of mortar?

SECTION-C

- Attempt **any Two** of the following: **(2x12.5=25)**
3. Draw Elevation, Section and Plans of Two consecutive course of 200mm thk brick wall of any one of the following bond, Assuming scale of 1:10.
- a) English Bond
 - b) Flemish Bond
4. Differentiate Between Tee Junction and Cross Junction? Draw Elevation and Plans of Two Consecutive Courses in tee Junction on scale 1:10 between 400mm thick wall and 200mm thick Internal wall.
5. Draw the details of a Squared rubble masonry wall 400 mm thick. Prepare plan, elevation and section of a 3000 mm. X 3000 mm wall.