Printed pages: 01 **Sub Code: AR102/ARMTU102**

Paper Id: **181022** **Roll No:** | | | | | | | | | | |

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.

http://www.aktuonline.com