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# BMS College of Engineering, Bangalore-560019

(Autonomous Institute, Affiliated to VTU, Belgaum)

## December 2016 Semester End Main Examinations

**Course: Building Construction & Materials- I**  
**Course Code: 09AT1DCBCM**

**Duration: 4 Hrs**  
**Max Marks: 100**  
**Date: 10.12.2016**

**Instructions:** 1. Answer ANY FIVE FULL questions choosing ANY FOUR FULL questions from Module 1, 2, 3 & 4 and ANY ONE FULL question from Module-5  
2. Assume any missing data suitably

### MODULE - 1

- 1 Draw to a scale of 1:10, cross section through a 230MM thick brick load bearing wall having: **20**
- (i) Clear height - 3.0M
  - (ii) Parapet wall thickness - 115MM
  - (iii) Door height - 2.1M
  - (iv) Random rubble masonry foundation - 900MM depth
  - (v) Plinth height - 300MM
- Dimension and label all the building components.

### MODULE - 2

- 2 a) Mention ANY TWO functions of the following: **2x5=10**
- (i) Lintel
  - (ii) RCC Column
  - (iii) Parapet wall
  - (iv) Foundation
  - (v) Plinth
- b) Indicate the conventions used for the following: **2x5=10**
- (i) Ground level
  - (ii) Timber
  - (iii) Stone - in section
  - (iv) Concrete
  - (v) Brick - in section

### MODULE - 3

- 3 a) Draw to a scale of 1:10, plans of odd and even courses of a L-joint formed by 1 ½ brick thick wall in English bond. **3+3=6**
- b) With the help of neat sketches, explain the following: **7+7=14**
- (i) Rat trap bond
  - (ii) Brick and stone composite masonry

**OR**

- 4 a) Draw to a scale of 1:10, plans of odd and even courses of a L-joint formed by 2 brick thick wall in double Flemish bond. **3+3=6**
- b) With the help of neat sketches, explain the following: **7+7=14**
- (i) Different types of concrete blocks
  - (ii) Any two types of Ashlar masonry

**MODULE - 4**

- 5 a) Draw the following to a scale of 1:10
- (i) Longitudinal section of a reinforced brick lintel **5+5=10**
  - (ii) Cross section of a steel lintel
- b) Draw to a scale of 1:20, PLAN and FRONT ELEVATION of a semi-circular arch in ashlar masonry for an opening of 1.8M with a clear height of 2.1M from floor level. **2+8=10**
- Dimension and label all the parts.

**MODULE - 5**

- 6 a) With the help of sketches, explain ANY FOUR types of dressing of stones. **2x4=8**
- b) Highlight the types and properties of aggregates. **06**
- c) Mention the architectural applications of glass. **06**

**OR**

- 7 a) With the help of sketches, explain Wattle & Daub construction. **08**
- b) Highlight the important reasons for seasoning of timber. **06**
- c) Mention the advantages of Stabilized Mud Blocks (SMBs) as a building material. **06**

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