

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

December, 2016

00123

BICE-005 : BUILDING TECHNOLOGY – I

Time : 3 hours

Maximum Marks : 70

Note : Attempt any **seven** questions. All questions carry equal marks.

1. Explain the following joints in stonework with neat sketches : 10
 - (a) Butt joint
 - (b) Rebated joint
 - (c) Joggle joint
 - (d) Tabled joint

2. Explain the following bonds in brick-work with neat sketches : 10
 - (a) Stretcher bond
 - (b) Header bond
 - (c) English bond
 - (d) Flemish bond

3. What are the objectives of providing foundations ? Explain the essential requirements of a good foundation. What data are required for the design of a shallow foundation ? 10
4. What are the requirements of an ideal material for the damp-proofing ? Explain the method of damp-proofing of an external wall with neat sketches. 10
5. (a) What are the requirements of partition walls ? 4
- (b) What are the materials used in R.C.C. works ? Explain in detail. 6
6. (a) Explain briefly the different types of vibrators used for compaction of concrete. 6
- (b) What is light-weight concrete ? What are the materials required to prepare light-weight concrete ? 4
7. What is an Arch ? Define the following terms with a neat sketch : 10
- (a) Crown
- (b) Rise
- (c) Span
- (d) Springer

8. (a) Discuss the factors affecting the choice of flooring materials. 4
- (b) Draw a neat sketch for scaffolding and label the following component parts in the sketch : 6
- (i) Standards
 - (ii) Ledgers
 - (iii) Putlog
 - (iv) Guard
 - (v) Platform
 - (vi) Raker
 - (vii) Transom
 - (viii) Brace
9. What are the characteristics of an ideal paint ? Explain the defects which are normally found in the painting work. What is the function of solvent in paint ? 10
10. Write short notes on any *four* of the following : $4 \times 2 \frac{1}{2} = 10$
- (a) Properties of Good Bricks
 - (b) Quick Setting Cement
 - (c) Precast Concrete
 - (d) Curing of Concrete
 - (e) Fibre Board
 - (f) Types of Tiles
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