

B. Tech 3rd Semester Examination

Building Construction and Materials (NS)

CE-212

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all, selecting one question from each sections A, B, C and D. Section E is compulsory.

SECTION - A

1. (a) Draw plans of two alternate courses and a front view of 1½ brick thick wall in Double Flemish Bond. (12)
- (b) What precautions would you suggest to a mason during the construction of a cavity wall? (8)
2. (a) Explain DPC treatment for walls in buildings, draw sectional views. (10)
- (b) Briefly explain various damp proofing materials used in building construction. (10)

SECTION - B

3. (a) A roof of a hall has to be covered with a queen post truss, draw the arrangement of different roof members. (12)
- (b) Explain method of construction of mosaic flooring. (8)
4. Draw an elevation and two sectional (along height and width) views of a battened and ledged door in building. (20)

SECTION - C

5. Discuss different methods of quarrying of stones. (20)
6. (a) Differentiate between clamp and kiln burning in manufacturing of bricks. (8)
- (b) Briefly explain working of Hoffman's Kiln for manufacturing of bricks. (12)

SECTION - D

7. (a) What are different factors affecting workability of concrete? Discuss in detail. (12)
- (b) What is a varnish? Discuss its constituents and various types of varnishes. (8)
8. Describe common defects in timber with diagram in detail. (20)

SECTION - E

9. (i) Distinguish between fat and hydraulic lime.
- (ii) How OPC is different from PPC?
- (iii) What are the factors affecting in deciding the location of a door?
- (iv) Define natural bed of stones and its importance in construction.
- (v) Draw sketch of Lean-to-roof.
- (vi) How DPC treatment is given to pitched roof?
- (vii) Explain movements of a swing door.
- (viii) Why curing of concrete is important?
- (ix) What is the difference between single and double Flemish bonds?
- (x) Explain Bay Window with sketch. (2×10=20)