

B.E. Fourth Semester (Civil Engineering) (C.B.S.)
Building Construction & Materials

P. Pages : 2

Time : Three Hours



NKT/KS/17/7267

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.
 11. Use of non programmable calculator is permitted.

1. a) What is foundation ? State the essential requirements of good foundation. **6**
- b) What is bearing capacity of soil ? Explain plate load test to find bearing capacity of soil. **7**

OR

2. a) What measures would you take while constructing foundation in Black Cotton soil ? Explain in detail. **6**
- b) Design the foundation for brick pillar 400 mm x 400 mm to carry axial load of 80 kN. Safe bearing capacity of soil is 60 kN/m². The angle of repose is 25° and the weight of soil is 16 kN/m³. Draw a neat dimensional sketch. **7**
3. a) What are the requirement of good bricks. **7**
- b) Write a short note on : **6**
- i) Stretcher Bond
 - ii) Header Bond
 - iii) Closer Bricks

OR

4. a) What are the causes of providing a cavity wall ? Explain the details of its construction with neat sketches. **6**
- b) Write the principles to be adopted while construction of brick masonry. **7**

5. a) Discuss the following : 7
i) Random Rubble Masonry
ii) Dry Rubble stone masonry
- b) What are the appliances used for lifting heavy stones ? Explain with sketches. 7

OR

6. a) What is the function of lintels and arches ? Discuss the commonly used types of lintels and arches. 7
- b) Discuss the causes and effects of dampness. 7
7. a) Enlist various types of pitched roofs and explain any one in detail. 7
- b) What are the ideal requirements of a floor. 7

OR

8. a) What are the different types of floor finishes ? Explain Terrazzo flooring. 7
- b) Explain various types of roof covering for pitched roof that are commonly adopted in India. Explain any one in detail. 7
9. a) What are the different types of stairs. Explain any one in detail. 7
- b) Draw the diagram of paneled door and explain its parts : 6
i) Hold fast
ii) Rails
iii) Mullion

OR

10. a) Discuss the factors to be considered regarding doors & windows : 6
i) Purpose
ii) Location
iii) Size
- b) Write short note on : 7
i) Pivoted window
ii) Casement window
11. a) Distinguish between plastering and pointing. What are the different types of pointing. 6
- b) What are the different types of scaffolding used. Explain any one in detail. 7

OR

12. a) What are the good requirements of paints. 6
- b) Explain the process of plastering. 7
