



- 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) Define foundation. Describe the causes of failure of foundation. **6**
- b) What do you mean by 'Bearing Capacity'? Describe any one method to determine 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 a stone pillar 40 cm x 30 cm carrying a superimposed load of 300 kN at its top. The height of the pillar above the ground level is 4 m. Take the unit weight of stone masonry as 22.5 kN/m^3 and that of lean cement concrete as 23 kN/m^3 . The soil has angle of repose of 25° , unit weight of 18 kN/m^3 & SBC of soil as 150 kN/m^3 . The foundation concrete may be in 1:4:8 having safe modulus of rupture equal to 245 kN/m^2 . **7**

3. a) Draw neat sketches in plan of successive courses and elevation to illustrate the construction of a brick wall $2 \frac{1}{2}$ brick thick in English bond and single flemish bond. **6**
- b) What is meant by reinforced brick work? Explain when it is provided. **7**

OR

4. a) Compare the English bond and flemish bond with sketches. **6**
- b) Describe with neat sketches. **7**
- i) King Closer
 - ii) Queen Closer
 - iii) Header
 - iv) Stretcher

5. a) Draw the elevation and cross section of typical stone masonry. **6**
i) Course Rubble Masonry.
ii) Ashlar Fine Masonry.
- b) What are the appliances used for lifting heavy stone? Explain briefly. Draw sketches. **7**

OR

6. a) What are the functions of Arches and lintels? Give relative merits and demerits of lintels over arches. **6**
- b) What are the causes of damp proofing? Also explain different methods of damp proofing. Explain in brief. **7**
7. a) What are the factors to be considered for the selection of floor material. **6**
- b) What are the different types of floor finishes? Explain Terrazzo flooring. **7**

OR

8. a) What are the various types of roof covering commonly used for pitched roof? Explain briefly. **6**
- b) What are the different types of pitched roof? Explain in brief. **7**
9. a) Explain essential requirement of good stair. **7**
- b) Write note on the following. **7**
i) Ramps
ii) Escalators

OR

10. a) Explain with sketches, the following types of doors. **7**
i) Collapsible Door
ii) Revolving Door
iii) Sliding Door
- b) Draw a neat sketch of a casement window having ventilators at the top and illustrate different parts of it. **7**
11. a) What is the object of pointing? Describe the operation of pointing. **7**
- b) Explain the process of plastering. **7**

OR

12. a) What are the defects in painting? Suggest suitable remedial measures. **7**
- b) What do you understand by the term scaffolding? Explain Masson's scaffolding with neat sketch. **7**
