



- 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.

1. a) Explain field test on cement & also list down the different types of lab test conducted on cement. **6**

b) Explain any two types of cement in details. **7**

OR

2. a) Explain impact value test on Aggregate with diagram. **6**

b) Explain in brief grading of coarse aggregate & fine Aggregate. **7**

3. a) List out different methods adopted for transportation of concrete & Explain any two in details. **6**

b) Explain hot whether concreting & underwater concreting. **7**

OR

4. a) What is mean by maturity of concrete. **6**

b) What is compaction, Explain different method's in compaction. **7**

5. a) Explain the relation between compression and tensile strength in concrete. **7**

b) Explain factor affecting strength of concrete. **7**

OR

6. Write short note on.

a) Flexural strength of Concrete. **3**

b) Split Tensile test on concrete. **3**

c) Effect on water cement Ratio of concrete. **4**

d) Explain Bond strength between concrete & Steel reinforcement. **4**

7. a) Explain concept of Mix design & Factor affecting mix proportion. 6
b) Explain mix design by Road Note No. 4 (BS) 7

OR

8. a) Write down the role of admixture as a component of concrete & Explain plasticizers. 6
b) Explain metakaolin & Surkhi as admixture. 7
9. a) Explain in brief polymer concrete & fibre reinforced concrete. 6
b) Write down the material. Used to manufacturing self compacting concrete. 7

OR

10. a) Explain plastic shrinkage and drying shrinkage. 6
b) Define creep and write down the factor affecting creep. 7
11. a) Explain permeability of concrete. 7
b) Explain the methods on repairs of crack in concrete. 7

OR

12. a) Write a note on distress in concrete structure and its cause. 7
b) Explain in brief non destructive test of concrete. 7
