

B.E. (Civil Engineering) Semester Third (C.B.S.)
Concrete Technology

P. Pages : 2

Time : Three Hours



KNT/KW/16/7211

Max. Marks : 80

Notes : 1. Due credit will be given to neatness and adequate dimensions.

1. a) Give the oxide composition of cement and state the effect of each on the properties of cement. **8**
- b) What are the field tests for judging the preliminary quality of cement? **6**
- OR**
2. a) Give the classification of aggregates according to source, shape and size. **8**
- b) Explain impact value test on Aggregate. **6**
3. a) What is workability and what are the factors affecting it? **7**
- b) Explain hot weather concreting. **6**
- OR**
4. a) What is curing? Explain various types of curing with their suitability? **7**
- b) What is mean by maturity of concrete? **6**
5. a) What are the factors affecting compressive strength of concrete. **6**
- b) Explain Modulus of elasticity of concrete. **4**
- c) Explain Poison's ratio of concrete. **4**
- OR**
6. a) Explain the effect of h/d ratio on strength of concrete. **4**
- b) Short note on indirect tension test. **5**
- c) How abrasion and erosion affects the concrete? **5**
7. a) Enlist various methods of mix design and discuss various factors affecting mix proportions. **5**
- b) Write the step by step procedure adopted for the method of mix design as per IS. **8**

OR

8. a) List various types of admixtures used in concrete. Explain plasticizers and super plasticizers. 7
- b) Write short note on Accelerators and Retarders. 6
9. Write short note on 13
- a) Self compacting concrete.
- b) Fiber reinforced concrete
- c) Shotcrete pumped concrete.

OR

10. a) Define and classify Shrinkage in concrete. How it can be controlled? 7
- b) What do you understand by Creep? What are various factors affecting it? 6
11. a) What is permeability of concrete? 6
- b) What are types of cracks in concrete? Explain various causes of cracks in concrete. 7

OR

12. Explain in brief the following non-destructive tests on concrete. 13
- 1) Rebound hammer method
- 2) Ultrasonic pulse velocity method.
