

- Q-3 Attempt all questions**
- (a) Explain the various factors affecting workability (4)
 - (b) What is segregation and bleeding, how can it be prevented? (6)
 - (c) Write a short note on retarders. (4)
- Q-4 Attempt all questions**
- (a) Write a short note on creep of concrete. (4)
 - (b) Enumerate the factors affecting modulus of elasticity. (4)
 - (c) Discuss the various classification of shrinkage in concrete. (6)
- Q-5 Attempt all questions**
- (a) Explain various types and causes of cracks in concrete. (8)
 - (b) Discuss the different methods of controlling sulphate attack. (6)
- Q-6 Attempt all questions**
- (a) What are the non-destructive methods for testing concrete? (8)
 - (b) Explain, how the flexural strength of concrete is determined. (6)
- Q-7 Attempt all questions**
- (a) Explain in detail about the various types of polymer concrete. (8)
 - (b) Write a short note on vacuum concrete with a neat sketch. (6)
- Q-8 Attempt all questions**
- (a) Explain in detail about the Fiber Reinforced Concrete and its application? (4)
 - (b) What are the factors affecting the proportioning of concrete mix? (6)
 - (c) What is meant by self compacting concrete and where it is used? (4)

