

**(OLD COURSE)****QP Code : 1482****(3 Hours)****[Total Marks : 100**

- Instructions: 1. Question no. 1 is compulsory and solve any four questions out of remaining six questions.  
 2. Draw neat sketches wherever necessary.  
 3. Figures to the right indicates full marks.

- 1 Attempt any four of the following 20
- (a) Explain what is fineness modulus of aggregates? How it is determined?  
 (b) Enlist any five properties for coarse and fine aggregates.  
 (c) Define high performance and high strength concrete.  
 (d) Write any five advantages of ready mixed concrete.  
 (e) Explain Segregation and Bleeding of concrete.  
 (f) Explain the importance of non destructive testing of concrete.
- 2 (a) Explain in detail manufacturing process of concrete. 10  
 (b) Explain in detail various properties of hardened concrete. 10
- 3 (a) Explain in detail various factors affecting workability of concrete. 10  
 (b) Explain step by step procedure to design concrete mix for compressive strength as per IS: 10262-1984. 10
- 4 (a) Draw flow diagram for ready mixed concrete plant and explain each operation in detail. 10  
 (b) Explain in detail Hot weather and cold weather concreting? 10
- 5(a) Enlist any five types of chemical admixtures commonly used in construction industry and explain them in detail. 10  
 (b) What are the various Non destructive tests carried out on concrete? Explain rebound hammer test in detail. 10
- 6 Write short notes on the following
- (a) Light weight concrete 5  
 (b) High density concrete. 5  
 (c) Self compacting concrete. 5  
 (d) Under water concreting. 5
- 7(a) What are the factors affecting durability of concrete? 5  
 (b) Explain sump cone test on concrete and its limitations. 5  
 (c) Explain in detail crack repair technique. 5  
 (d) Explain various methods adopted for curing of Concrete members. 5