



Concrete Technology (1040)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Solve **any two** questions from each unit.
5. Neat diagrams must be drawn wherever necessary.
6. Assume suitable data if necessary.

UNIT - I

1. a) List the laboratory test on cement and their I.S requirements, explain any one test in detail. **10**
b) Explain any two laboratory test on aggregate in detail. **10**
c) Explain : **10**
i) Hydration of cement.
ii) Suitability of water to be used in concrete.

UNIT - II

2. a) List the test of fresh concrete. Explain any one in detail. **10**
b) Explain any two properties of hardened concrete in detail. **10**
c) Explain : **10**
i) Quality control during concreting.
ii) Segregation and bleeding of concrete.

UNIT - III

3. a) Explain Ready mixed concrete and polymer concrete. **10**
- b) Explain about Admixture in detail. **10**
- c) Explain : **10**
 i) Self compacting concrete.
 ii) Pipe crete concrete.

UNIT - IV

4. a) Define concrete mix Design ? State Importance and give the first of method of mix design. **10**
- b) Explain any two method of mix design in detail. **10**
- c) Explain : **10**
 i) Statistical quality control.
 ii) High strength concrete mix design.

UNIT - V

5. a) Explain Rebound hammers test in detail. **10**
- b) Explain Deterioration of concrete in detail. **10**
- c) Explain : **10**
 i) Non - destructive testing of concrete.
 ii) Carbonation of concrete.
