D - PH OctA.-2 48

Con. 5785-13. **LJ-10592**

(3 Hours) **[Total Marks : 100**

N.B. :(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) What are the various physical properties of cement as per I.S code?
   (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) Define 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 10 IS: 10262-1984. **10**

4. (a) Enlist any five types of admixtures commonly used and explain them in detail. **10**
   (b) What are the various Non destructive tests carried out on concrete ? Explain any one test in detail. **10**

5. (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**

6. Write short notes on the following :–
   (a) Light weight concrete **5**
   (b) Fibre reinforced concrete **5**
   (c) Polymer concrete **5**
   (d) Under water concreting. **5**

7. (a) What are the factors affecting durability of concrete ? **5**
   (b) What is carbonation of concrete ? **5**
   (c) Explain in detail crack repair technique. **5**
   (d) Explain various methods adopted for curing of Concrete members. **5**