

Roll No.

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech.(SE) (E-III) (Sem.-3)

COMPOSITE MATERIALS

Subject Code : CE-517

Paper ID : [E0863]

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1. (a) What are the factors affecting workability of concrete?
(b) Explain the working procedure of finding workability by Compaction Factor Test. (10+10)
2. Give the classification of Indian fly ashes. List the strengths of fly ash that make it suitable to use in concrete. (20)
3. List the differences between polymer impregnated concrete. Polymer modified concrete and polymer concrete. Also discuss uses of polymer impregnated concrete. (20)
4. Define Ferro cement. Explain closed mould method *V/s* open mould method of manufacture of Ferro cement. (20)
5. List the aspects of high performance concrete that are related to strength & durability. Distinguish between high performance concrete and high strength concrete. (20)
6. (a) What is Pumice concrete? Give applications of light weight concrete. (10)
(b) Describe the durability and applications of sulphur concrete. (10)
7. (a) What is Volume fraction in FRC and how does it affect the behaviour in tension, flexure and shear? (10)
(b) Is confinement of concrete and fibre reinforcement similar? If so, how to use fibre concrete advantageously in resisting shear? (10)
8. (a) Compare the elastic properties of normal weight concrete and lightweight aggregate concrete. (10)
(b) What are the various methods of producing lightweight aggregate artificially? (10)