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Total Number of Pages : 01

M.TECH

AR-19

M.TECH 1<sup>ST</sup> SEMESTER EXAMINATIONS NOV/DEC 2019

SE, MPESE1042

ADVANCED CONSTRUCTION MATERIALS

Time: 3 Hours

Max Marks : 70

The figures in the right hand margin indicate marks.

PART-A

(10 X 2=20 MARKS)

1. Answer the following questions.

- (a) What are the steps adopted to control bleeding?
- (b) What are the factors affecting proportioning of concrete mixes?
- (c) Define shrinkage of concrete.
- (d) Differentiate between HSC and HPC.
- (e) What do you mean by bauschinger effect?
- (f) How heating affects the strength and the stiffness of concrete?
- (g) What are the advantages of Ferro cement?
- (h) State the role of accelerator and retarder in Concrete Preparation?
- (i) What do you mean by GGBS?
- (j) What are laminar composites?

PART-B

(5 X 10=50 MARKS)

Answer any five questions from the following.

2. (a) Explain the methods of pumping of concrete.  
(b) What do you understand by carbonation of concrete? How is it tested?
3. (a) Write in detail about High Strength Concrete.  
(b) Explain various methods of non-destructive tests?
4. (a) What precautions need to be taken for hot weather concreting?  
(b) Explain any one laboratory test to measure the workability of concrete with sketch.
5. What are Geosynthetics? How are they classified? What are the advantages & applications?
6. (a) Describe the mechanical & deformational behavior and microstructure of hardened concrete  
(b) ) State the types of fibers and materials used in fiber reinforced concrete
7. (a) What is fiber reinforced glass? Explain the various properties of fiber reinforced Glass?  
(b) Explain any three tests for hardened concrete in detail.
8. Write Short notes on  
(a) Admixture  
(b) Flow table test