

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Civil Engineering) (Sem.-4)

**CONCRETE TECHNOLOGY**

Subject Code : BTCE-401-18

M.Code : 77644

Date of Examination : 02-07-22

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

**1. Write briefly :**

- a) What do you mean by bulking of sand?
- b) How does freeze-thaw damage occur?
- c) What are the raw materials used for production of cement?
- d) Define hot weather concreting.
- e) How can high strength concrete be classified?
- f) What is self-healing concrete?
- g) List various non destructive tests to evaluate concrete.
- h) What different types of polymers are used in concrete?
- i) What do you understand by carbonization of concrete?
- j) Draw stress strain curves for cement paste and aggregate.

### SECTION-B

2. How mineral admixtures are classified?
3. What are the reasons for the cracking of concrete and how does it affect durability?
4. How is concrete mix designed as per IS:10262: 2009?
5. Differentiate between pull out and pull off tests.
6. What are the basic properties of fibre reinforced concrete which can be advantageously made use of in the design of structural elements?

### SECTION-C

7. Describe various tests conducted on cement to determine its quality.
8. Discuss the various methods adopted for compaction of concrete.
9. What are the various methods of producing light weight aggregates artificially?

**NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.**