

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter 2019-20 Examination

Semester: 3**Subject Code: 03104204****Subject Name: Concrete Technology****Date: 27/11/2019****Time: 02:00pm to 04:30pm****Total Marks: 60****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions - (Fill in the blanks, one word answer, MCQ-not more than Five in case of MCQ) (All are compulsory) (Each of one mark) (15)

- 1.The standard size of a concrete cube for compressive strength is
(a) 50 mm (b) 100 mm (c) 150 mm (d) 200 mm
- 2.The strength of concrete is decreased by :
(a) Vibration
(b) Impact
(c) Fatigue
(d) All of the above
- 3.Water-cement ratio in concrete is the ratio of
(a) Volume of water to volume of cement
(b) Volume of water to the weight of cement
(c) Weight of water to the weight of cement
(d) Weight of water to the volume of cement
- 4.What is concrete mix design
- 5.Give any two examples of natural aggregates
- 6.Define Fine aggregate and Coarse aggregate
- 7.How fineness of cement affect the rate of development of strength?
8. List the tests for workability of concrete.
- 9.What is Fly Ash?
10. Efflorescence in cement is caused due to an excess of
11. What should be the minimum compressive strength of concrete grade M20?
12. Define the term Creep in concrete.
13. Give the Bogue's Compound
14. Define Shrinkage in concrete
15. Define Carbonation of concrete

Q.2 Answer the following questions. (Attempt any three) (15)

- A) Enlist the types of cements and explain any two.
- B) Enlist the purposes of using admixture in concrete
- C) Differentiate between setting and hardening of cement
- D) Explain Sulphate Attack on concrete.

Q.3 A) Give the detailed classification of the aggregates (07)
B) What is NDT? Explain Rebound hammer test in detail. (08)

OR

- B) Explain the need of curing. State different methods of curing of concrete. (08)

Q.4 A) Explain the manufacturing of cement by dry process (07)

OR

- A) Explain the manufacturing of cement by wet process (07)
- B) Explain slump test for the measurement of workability of concrete. (08)