

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter 2022 - 23 Examination

Semester: 3**Subject Code: 203115205****Subject Name: Concrete Technology****Date: 08/10/2022****Time: 2:00 pm to 4:30 pm****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. Which chemical composition has highest content in OPC?
(a) Alumina (b) Silica (c) Lime (d) Iron Oxide
2. The slurry with the desired lime content passes into the _____
(a) Clinker (b) Rotary kiln (c) Slurry tank (d) Cement silo
3. Which machine records the change in length of specimen?
(a) Impact testing machine (b) Universal testing machine (c) Rockwell tester
(d) Brinell tester
4. Which cement is used for mainly building construction where strength required with age?
(a) Rapid Hardening Cement (b) Low Heat Cement (c) Portland Pozzolana Cement (d) Quick Setting Cement
5. What is the size of fine aggregates?
(a) 4.75mm (b) < 4.75mm (c) > 4.75mm (d) 12mm
6. The development of first 28 days strength is on account of the hydration of _____
7. In cement hardening process _____ instants are very important.
8. The ability of the material to resist stress without failure is called _____
Strength
9. Classification of admixtures are classified into _____ types.
10. Write full names of OPC and PPC
11. What is concrete admixtures?
12. How many ingredients needed to prepare concrete?
13. What do you mean by workability?
14. What is durability of concrete?
15. Write application of low heat cement?

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

- A) What is heat of hydration process?
- B) Write types of concrete.
- C) What is initial setting time and final setting time of concrete?
- D) List out non-destructive tests of concrete

Q.3 A) Explain slump test of fresh concrete (07)

- B) Write types of admixtures and explain any one of them. (08)**

OR

- B) Write short note on dry process of cement making. (08)**

Q.4 A) Explain in brief about rebound hammer test (07)

OR

- A) Write short note on (1) self-compacting concrete (2) Fiber reinforced concrete (07)**

- B) List out the tests carried out on aggregate and explain impact test. (08)**