

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**B.Tech. Summer 2018 – 19 Examination**

**Semester: 3**  
**Subject Code: 03104204**  
**Subject Name: Concrete Technology**

**Date: 28/05/2019**  
**Time: 02:00 pm to 04:30 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 - (Each of one mark) (15)**

1. Full form of ISI?
2. Below which Size of aggregate known as fine aggregate?
3. Define aggregate abrasion value?
4. What is the meaning of M25 grade?
5. What is shrinkage?
6. Water Cement ratio is\_\_\_\_\_.
7. NDT means \_\_\_\_\_.
8. Compacting factor is the ratio of weight of partially compacted concrete to weight of fully compacted concrete.
9. Specific gravity is ratio of\_\_\_\_\_.
10. Entrapped air means \_\_\_\_\_.
11. If the slump of concrete mix is 60mm its workability is  
a) Very low                      b) low                      c) medium                      d) high
12. The cement becomes useless if its absorbed moisture exceeds  
a) 1%                      b) 2%                      c) 3%                      d) 5%
13. Minimum w/c ratio is  
a) 0.30    b) 0.40                      c) 0.50                      d) 0.60
14. The reasonable slump for mass concrete should be  
a) 90-180    b) 10-30                      c) 50-75                      d) 25-50
15. Tremie is a  
a) Bucket    b) water tight pipe                      c) bag                      d) pre packed concrete

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

- A) Adverse affect of excess use of admixtures?
- B) Enlist method of curing?
- C) Short note on bond stress?
- D) Nominal mix concrete and design mix concrete difference ?

**Q.3 A) Short note on gap grading? (07)**

- B) Factors affecting the choice of mix design? (08)

**OR**

- B) Short note on shotcrete or guniting? (08)

**Q.4 A) What is NDT? Explain ultrasonic pulse velocity in detail? (07)****OR**

- A) list out types of cement and explain any two of them? (07)

- B) Write down classification of aggregate based on unit weight? (08)