

Code: CT-502  
Title: Concrete Technology  
Semester: 5<sup>th</sup>

Time: 3 Hrs.

Full Marks: 70



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PART –A (25 Marks)

Multiple Choice Questions

1. Which cement contains high percentage of  $C_3S$  and less percentage of  $C_2S$ ?  
a) Rapid Hardening Cement b) Ordinary Portland Cement c) Quick Setting Cement d) Low Heat Cement (2)
2. Which cement is used to store for longer duration in wet climatic conditions?  
a) Expansive Cement b) Ordinary Portland Cement c) Hydrophobic Cement d) Quick Setting Cement (2)
3. What is the size of fine aggregates?  
a) 4.75mm b) < 4.75mm c) > 4.75mm d) 12mm (2)
4. Bulking \_\_\_\_\_ with increase in moisture.  
a) Increase b) Decrease c) First increase then decrease d) First decrease then increase (2)
5. What do you mean by admixtures?  
a) Ingredients which are added to in cement before or after concrete mix  
b) Ingredients which are added to make aggregates healthier  
c) Ingredients added in cement to make it shinier  
d) Ingredients added in concrete to make good workability (2)
6. Which of the following statement is incorrect about the function of admixtures.  
a) To accelerate the initial set of concrete, to speed up the rate of development of strength at early ages  
b) To enhance the workability  
c) To reduce the segregation in grout and concrete mixers  
d) To retard the initial set, to keep concrete workable for a shorter time for placement (2)

Fill in the Blanks

7. Admixtures which cause early setting, and hardening of concrete are called \_\_\_\_\_ (2)
8. Workability of concrete is directly proportional to \_\_\_\_\_ (2)

9. Compound of cement liberates highest heat is \_\_\_\_\_ (2)
10. Chemical composition that has highest content in OPC is \_\_\_\_\_ (2)
11. Concrete placed in cold weather will take \_\_\_\_\_ time to gain strength. (2)
12. A lower water cement ratio will leads to \_\_\_\_\_ (2)
13. The meaning of '20' in M20 grade concrete is \_\_\_\_\_ (1)

PART B (Marks 45 )

Answer any **FIVE**

14. Write short notes on \_\_\_\_\_ (9)
- a) Yield of Concrete b) Grades of concrete c) Curing
15. Write down about the whole manufacturing process of cement. (9)
16. Define workability. What are the various factors affecting the workability. (9)
17. Discuss rheology and rheological properties of concrete.in details. (9)
18. Explain the processes involved in the manufacturing of concrete. (9)
19. What are admixtures? What are the different types and uses of admixtures? (9)

