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**Question Paper Code : 91265**

**B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2019**  
**Sixth Semester**  
**Civil Engineering**  
**CE 6002 – CONCRETE TECHNOLOGY**  
**(Regulations – 2013)**

**Time : Three Hours**

**Maximum : 100 Marks**

**Use Code Book IS 10262, IS 456**  
**Answer ALL questions.**

**PART – A**

**(10×2=20 Marks)**

1. What is the chemical composition of cement ?
2. What is the common classification of aggregates ?
3. What are the uses of mineral admixtures ?
4. What is the use of Retarder ?
5. What is meant by proportioning of concrete ?
6. Give the types of concrete mixes.
7. Define workability.
8. What are the causes of bleeding and segregation ?
9. Define Ferro-cement.
10. What are the uses of polymer concrete ?

**PART – B**

**(5×13=65 Marks)**

11. a) Describe the importance of the quality of water used for concreting.  
(OR)  
b) Explain in detail of any three tests for coarse aggregates.



12. a) Write notes on (i) Accelerators and (ii) Plasticizers.

(OR)

- b) Explain in detail the composition, physical properties of the Silica fume and discuss how it improves the properties of concrete.

13. a) (i) What are the factors affecting the choice of mix proportions ?  
(ii) What are the requirements of concrete mix design as per BIS ?

(OR)

- b) Explain the procedure of selection of constituent materials of concrete.

14. a) Explain in detail of any two tests for Fresh Concrete.

(OR)

- b) Draw stress strain curve for concrete and explain all salient features.

15. a) In what way the behaviour of FRC can be used for seismic – resistant design ? Explain.

(OR)

- b) Describe the procedure of Shotcrete.

PART – C

(1×15=15 Marks)

16. a) Explain the mix design procedure for concrete as per IS method.

(OR)

- b) How will you construct Ferro-cement structure and explain how effective it is in terms of cost ?