

Seat  
No.

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BAI1302

## Concrete Technology (New) (1040)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any two** questions from each unit.
5. Neat diagrams must be drawn wherever necessary.
6. Figures to the right indicate full marks.

### UNIT - I

1. List the types of cement and its specific use. Explain any two types in detail. **10**
2. a) What is "Grading of aggregate" How do you determine the fineness modulus of aggregate ? **5**  
b) State and explain the term 'Heat of Hydration of cement'. **5**
3. a) How the setting time of cement controlled ? **5**  
b) What is the importance of sieve analysis in aggregates ? **5**

### UNIT - II

4. Define curing of concrete what are different methods of curing ? Describe steam curing in detail. **10**
5. Define the workability of concrete state the various methods for measurement of workability of concrete mix in laboratory. Explain any one with sketch. **10**
6. Write notes on. **10**
  - a) Under water concreting.
  - b) Methods of batching.

**UNIT - III**

7. Define admixtures and additives. Describe in brief the effects of air entrainment on properties of concrete. 10
8. How cement content and original water cement ratio is determined from hardened concrete ? 10
9. How the following test carried on concrete ? 10  
a) Compression test.  
b) Split tension test.

**UNIT - IV**

10. a) Enlist the basic data required for mix design. 5  
b) What the different factors that control quality of concrete ? 5
11. a) Explain the term 'Target Strength' for mix design. 5  
b) What do you mean by Nominal mix, standard mix and design mix ? 5
12. a) Describe statistical quality control of concrete. 5  
b) What data or aggregates are required for the design of concrete mix ? 5

**UNIT - V**

13. a) What is evaluation of cracks ? Why is it necessary ? 5  
b) Write a short note on 'Repair of Jacketing'. 5
14. a) What do you mean by carbonation of concrete ? 5  
b) How carbonation of concrete can be determined ? 5
15. a) What are the special precautions for concreting in hot weather ? 5  
b) Write short note on "pumping of concrete". 5

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