

**TH4 Concrete Technology**

**Full marks-80**

**Time- 3hrs**

**Answer any five questions including Q.No.01 & 02**  
**Figure in the right hand margin indicates marks**

**1. Answer all the questions.**

**(2 x 10 =20)**

- a) Define fineness of cement.
- b) What is meant by RMC?
- c) What is acid attack on concrete?
- d) Define Concrete.
- e) Define Abram's law.
- f) Define cement and write its composition.
- g) What is curing of concrete?
- h) What is hydration of cement?
- i) What is workability of Concrete?
- j) Define compaction factor.

**2. Answer any six questions**

**(5x 6=30)**

- a) Explain Permeability and durability of concrete.
- b) Explain different types of cement
- c) Explain creep and shrinkage of concrete.
- d) Explain different tests to determine workability of concrete.
- e) Write down the advantages and disadvantages of concrete.
- f) Describe briefly the classification of aggregates according to shape.
- g) Write the important functions of admixtures

**Answer any three questions**

3. Explain the steps involved in production of concrete. **10**
4. What is concrete deterioration? Explain the types of concrete deterioration? **2+8**
5. Explain the different reasons for cracking of hardened concrete. **10**
6. Explain Quality control of concrete. **10**
7. Write short notes on: **5+5**
  - a) Nominal mix concrete and Design Mix concrete
  - b) Guniting

6<sup>TH</sup> SEM. /CIVIL / 2023(S)

TH-4 Concrete Technology

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2  
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
  - a. What do you mean by nominal mix.
  - b. What is hydration of cement ?
  - c. Define fineness modulus ?
  - d. What do you mean by efflorescence ?
  - e. What are the types of deterioration ?
  - f. What is the effect of sulphate if present in concrete?
  - g. What do you mean by accelerator?
  - h. What is gunitting ?
  - i. Define creep and shrinkage of concrete?
  - j. What is workability of concrete?
2. Answer **Any Six** Questions 6 x 5
  - a. Explain about types cement?
  - b. Write the short notes on shotcrete concrete and ready mix concrete.
  - c. Explain about different types of admixtures?
  - d. Write the difference between nominal and design mix concrete..
  - e. What are the types of formwork ?
  - f. What are various factors causing variation in quality of concrete?
  - g. How cracks are repaired in concrete?
3. Write down different tests of cement ? 10
4. Write the requirement of mix design and give a brief about I .S .code method of mix design. 10
5. What are the methods to determine workability of concrete? 10
6. Explain about deterioration of concrete and its prevention? 10
7. What is inspection and testing and durability requirement as per I S 456 ? 10



29/07/2022  
Morning. 6th Sem

**6<sup>TH</sup> SEM./ CIVIL / 2022(S)**  
**TH4 Concrete Technology**

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2  
Figures in the right hand margin indicates marks

1. Answer All questions 2 x 10
  - a. Letter 'M' and number in grade "M25 "refers to what?
  - b. What do you mean by setting time of cement?
  - c. What is meant by retarder?
  - d. What is curing?
  - e. Give dimensions of slump cone?
  - f. What is gunnitting?
  - g. What do you mean by efflorescence?
  - h. Write composition of cement?
  - i. What is soundness of cement?
  - j. What is air entraining admixture?
  
2. Answer Any Six Questions 6 x 5
  - a. What do you mean by grading of aggregate?
  - b. What are important functions of admixtures?
  - c. Explain methods for compacting concrete?
  - d. What is silicafume concrete?
  - e. How cracks are repaired in concrete?
  - f. What are the factors responsible for variation in quality of concrete?
  - g. What are the preventive measures for concrete deterioration?
  
3. Define workability and its different tests to determine it? 10
4. Write down different tests of cement? 10
5. What is inspection and testing and durability requirement as per I S 456? 10
6. What the properties are of harden concrete? 10
7. Write short notes on: 10
  - (a)Ready mix concrete
  - (b)Accelerator

**5<sup>TH</sup> SEM/ CIVIL/ 2021(W) OLD  
CET 504 Concrete Technology**

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2  
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
  - a. What do you mean by M15 grade concrete?
  - b. What is gunniting?
  - c. State workability.
  - d. Define fineness modulus of aggregates.
  - e. What is creep in concrete?
  - f. What is hydration of cement?
  - g. Name the apparatus which is used to find out
    - (i) Initial setting time of cement
    - (ii) Soundness of cement
  - h. What is an admixture?
  - i. What do you mean by bulking of sand?
  - j. List out different tests used for measuring workability of concrete.
2. Answer **Any Six** Questions 5X6
  - a. Write down the advantages and disadvantages of concrete.
  - b. Describe briefly classification of aggregate based on their shape.
  - c. Write a short note on high performance concrete.
  - d. Write down the advantages of quality control.
  - e. Write down different functions of admixture.
  - f. What is alkali aggregate reaction and mention the factors promoting the alkali aggregate reaction.
  - g. How does the presence of sugar and oil in water affect the concrete?
3. a. What do you mean by flexural strength of concrete 2
- b. What are the types of deterioration of concrete and how it can be prevented? 8
4. Describe in detail the factors influencing the choice of mix proportion. 10
5. a. What is the effect of water cement ratio on strength of concrete? 2
- b. Define slump. How slump test is carried out in laboratory? Explain with neat sketches. 8
6. a. Differentiate between fine aggregate and coarse aggregate. 2
- b. Describe in detail the methods of curing of concrete. 8
7. a. What is initial setting time of cement? 2
- b. Explain the function and property of any two types of admixture. 8



**V- SEM CIVIL/2019(W)**  
**CET-504 CONCRETE TECHNOLOGY**

Full Marks: 80

Time : 3 Hours

Answer any FIVE Questions including Q No. 1 & 2

Figures in the right hand margin indicates marks

1.	<p>Answer ALL the questions.</p> <p>(a) What are different grades of concrete ?</p> <p>(b) What do you mean by fresh concrete ?</p> <p>(c) What is the significance of water cement ratio ?</p> <p>(d) Define shrinkage of concrete.</p> <p>(e) Calculate modulus of elasticity for M<sub>20</sub> grade concrete.</p> <p>(f) Why the evaluation of crack is necessary in concrete ?</p> <p>(g) Write down the different phases for production of concrete.</p> <p>(h) Write down the materials used in fibre reinforced concrete.</p> <p>(i) Name the different tests used to measure workability of fresh concrete.</p> <p>(j) Differentiate creep of concrete from that of shrinkage.</p>	2×10
2.	<p>Answer any SIX questions.</p> <p>(a) What are the properties of admixtures ?</p> <p>(b) What are the various standard tests available for determining the quality of water in laboratory?</p> <p>(c) What do you mean by graded coarse aggregate? Write down the limits of percentage passing for 20mm nominal size coarse aggregate as per IS 383:1970.</p> <p>(d) Write advantages and disadvantages of concrete.</p> <p>(e) Name the different non-destructive tests commonly used to determine strength of concrete. Explain briefly about one of them.</p> <p>(f) Write down the advantages of quality control of concrete.</p> <p>(g) What are the requirements of workability?</p>	5×6
3.	Describe the various reasons of cracks found in concrete works.	
4.	Describe causes and effects of corrosion of steel reinforcement in RCC works.	10
5.	Describe IS method of mix design of concrete.	10
6.	Classify the aggregate according to their shape and size.	10
7.	What is batching of materials? How it is carried out at site?	10
		10