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Roll No. ....

220731

**3rd Sem / Branch : Civil  
Sub.: Concrete Technology**

Time : 3Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory  $(6 \times 1 = 6)$

Q.1 What is concrete? (CO3)  
a) A mixture of homogenous materials  
b) A mixture of material and hydrogen  
c) A mixture of cement and hydrogen sulphide  
d) A mixture of cement, water, and aggregates

Q.2 Hydration of cement is chemical reaction of cement with (CO5)  
a) Base b) Acid  
c) Salt and acid d) Water

Q.3 Which of the following stress can Plain cement concrete endure? (CO3)  
a) Shear stress  
b) Tensile stress  
c) Compressive stress  
d) Tensile, compressive and shear stresses

Q.4 Which of the following is used to test the Standard consistency of cement? (CO5)

- a) Duff Abrams apparatus
- b) Soundness meter
- c) Vicat apparatus
- d) Le Chatelier apparatus

Q.5 What are Plasticizers? (CO5)

- a) Which reduces water for workability
- b) Which oxidizes water for workability
- c) Which decreases workability at the same water content
- d) Which adds water for workability

Q.6 Which of the following is not a type of Non-Destructive testing? (CO6)

- a) Ultrasonic test
- b) Eddy current testing
- c) Compression testing
- d) Visual testing

**SECTION-B**

**Note:** Objective/Completion type questions. All questions are compulsory.  $(6 \times 1 = 6)$

Q.7 In 456:2000 has specified full strength of concrete \_\_\_\_\_ Days. (CO3)

(1)

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(2)

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Q.8 Slump cone test is used to determine \_\_\_\_\_. (CO4)

Q.9 The standard size of a concrete cube for compressive strength test is \_\_\_\_ mm. (CO3)

Q.10 M15 grade of concrete approximate proportion \_\_\_\_\_. (CO4)

Q.11 What percentage of aggregates are required in concrete in terms of volume \_\_\_\_ %. (CO1)

Q.12 Permissible compressive strength of M30 concrete grade is \_\_\_\_\_. (CO4)

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain the Slump Test? (CO3)

Q.14 Define fineness modulus? (CO2)

Q.15 Write the name of ingredient of Cement? (CO5)

Q.16 Classify the Aggregate according to size? (CO1)

Q.17 What do you mean by soundness of cement? Write the test name of soundness test? (CO5)

Q.18 Define Non Destructive Test and name the various type Non Destructive Test? (CO6)

Q.19 What is water cement ration Law? (CO5)

Q.20 Differentiate between rich and lean mix? (CO4)

Q.21 Differentiate between segregation and bleeding? (CO4)

Q.22 Give importance of non-destructive test? (CO6)

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Give the test for finding the flakiness index on an Aggregates? (CO1)

Q.24 Explain the Properties of Aggregate? (CO2)

Q.25 What is the bulking of sand? Explain the procedure to find the Bulking Percentage? (CO4)