Question Paper Code: R18A22CE04

R18

ANURAG Engineering College

(An Autonomous Institution)

II B.Tech II Semester Supplementary Examinations, Jan/Feb-2024

CONCRETE TECHNOLOGY

(CIVIL ENGINEERING)

Time: 3 Hours **Max.Marks:75**

Section – A (Short Answer type questions) (25 Marks)

Answer All Questions		Course Outcome	B.T Level	Marks
1.	What is the chemical composition of cement?	CO1	L1	2M
2.	What is the common classification of aggregates?	CO1	L1	3M
3.	Define Workability	CO2	L1	2M
4.	What are the Causes of bleeding and segregation?	CO2	L1	3M
5.	What is M20 Mix concrete	CO3	L1	2M
6.	Define Nominal Mixes	CO3	L1	3M
7.	What is meant by gel-space ratio?	CO4	L1	2M
8.	What are the factors causing shrinkage in concrete?	CO4	L1	3M
9.	What is meant by No fine concrete?	CO5	L1	2M
10.	What are the uses of polymer concrete?	CO5	L1	3M

Section B (Essay Questions)

Answer all questions, each question carries equal marks. **(5 X 10M = 50M)**

11. A)	Explain the different types of cement in detail	CO1	L2	10M
	OR			
B)	If 20 kg of coarse aggregate is sieved through 80 mm, 40 mm,20 mm, 10 mm, 4.75 mm, 2.36 mm, 1.18 mm, 600 micron, 300 micron and 150 micron standard sieves and the weights retained are 0 kg, 2 kg, 8 kg, 6 kg, 4 kg respectively, what is the fineness modulus of the aggregate?	CO1	L3	10M
12. A)	Determine the steps in the manufacture of concrete.	CO2	L3	10M
	OR			
B)	Define measurement of workability by different tests?	CO2	L2	10M
13. A)	Design the concrete mix for the following data: characteristic compressive strength= 20MPa, maximum size of aggregate =20mm (angular), Degree of workability = 0.9 CF, Degree of quality control = good and type of exposure = severe. Water absorption by CA = 0.5% and moisture content in FA = 2.0%. Assume any suitable missing data. Use BIS Method of mix design.	CO3	L3	10M
	OR			
B)	Explain in detail about various natural and chemical admixtures used in concrete	CO3	L2	10M
14. A)	What are the various factors affecting strength of hardened concrete?	CO4	L2	10M
	OR			
B)	Explain various codal provisions for Non destructive testing of hardened concrete	CO4	L3	10M

15. A)	What are the basic properties of fibre – reinforced concrete which can be advantageously made use of in the design of structural elements?	CO5	L3	10M
	OR			
B)	Explain the various methods of polymer concrete.	CO5	L2	10M