Code No: R1622014 **R16** SET - 1

II B. Tech II Semester Regular/Supplementary Examinations, November - 2020
CONCRETE TECHNOLOGY
(Civil Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (Part-A and Part-B)
2. Answer ALL the question in Part-A
3. Answer any FOUR Questions from Part-B

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PART –A

1.	a)	What is sulphate attack?	(2M)
	b)	Mention the Effect of time and temperature on workability	(3M)
	c)	What is the affect of rate of loading on compressive strength of concrete	(2M)
	d)	Mention how the shrinkage of concrete is prevented	(2M)
	e)	List the factors considered in the concrete mix design	(3M)
	f)	What is aspect ratio of fiber and mention its affects on fresh properties of concrete	(2M)

PART -B

2.	a)	Discuss about the different stages of hydration of cement	(7M)
	b)	Discuss about the different chemical admixtures and their functions	(7M)
3.	a)	Discuss about the slump test to determine the workability of fresh concrete	(7M)
	b)	What is bleeding and explain method of Test for Bleeding of Concrete	(7M)
4.	a)	Briefly discuss about the methods to assess tensile strength of concrete	(7M)
	b)	Discuss about the Factors Affecting Compressive Strength of concrete	(7M)
5.	a)	What is creep and discuss about the Factors affecting Creep of concrete	(7M)
	b)	Explain in detail about the determination of Young's Modulus and Stress-strain curve for concrete.	(7M)
6.		Design a concrete mix of grade M40 for the following data as per IS:10262 The specific gravity of FA and C.A. are 2.67 and 2.75 respectively. The dry rodded bulk density of C.A. is 1600 kg/m^3, and fineness modulus of FA is 2.80. Ordinary Portland cement with specific gravity 3.06 to be used. A slump of 40 mm is required. water absorptive of C.A. is 1% and free surface moisture in sand is found to be 3 per cent. Type of work is RCC and SP is allowed. Assume any other suitable data if required.	(14M)
7.	a)	Distinguish high strength and High performance concrete and their applications	(7M)
	b)	Discuss about the manufacture of light weight concrete and its application	(7M)
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