

Model Question Paper-1/2 with effect from 2022-23(CBCS Scheme)

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Fourth Semester B.E. Degree Examination Concreting Techniques and Practices

TIME:03Hours

Max.Marks:100

Note: Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

Module-1			*Bloom's Taxonomy Level	Marks
Q.01	a	Explain the manufacturing of cement by dry process with flow chart.	L2, CO1	08
	b	Explain the utilization of low carbon cement with respect to sustainable concrete production.	L2, CO1	04
	c	Define Mineral admixture. Explain any two types of mineral admixtures.	L2, CO1	08
OR				
Q.02	a	Explain the significance of composite cement and ultrafine materials in enhancing concrete properties.	L2, CO1	07
	b	Discuss the significance of fineness test in ensuring the quality and performance of concrete mixes incorporating with fly ash and recycled aggregate.	L2, CO1	07
	c	Explain the types of cement.	L2, CO1	06
Module-2				
Q.03	a	Define chemical admixture. Explain its sources.	L2, CO2	05
	b	Discuss the impact of blending fine and coarse aggregates on concrete properties.	L2, CO2	10
	c	Explain the requirements of chemical admixtures.	L2, CO2	05
OR				
Q.04	a	Explain the laboratory testing procedures employed to evaluate the effectiveness and safety of chemical admixtures in concrete mixes.	L2, CO2	08
	b	Discuss the factors influencing the selection and proportioning of aggregate blends for concrete mixes.	L2, CO2	08
	c	What is aggregate gradation? How does it influence the performance of concrete mixes?	L2, CO2	04
Module-3				
Q.05	a	Explain the concept of volumetric mix design in concrete production.	L2, CO3	05
	b	Explain the factors considered when performing mix design by the absolute volume method.	L2, CO3	07
	c	Explain the key steps involved in conducting mix design by absolute volume method.	L2, CO3	08
OR				
Q.06	a	Explain the factors influencing the selection of higher-grade concrete.	L2, CO3	05
	b	Define workability of concrete. Explain any two various tests conducted to measure the workability of high performance concrete (HPC).	L2, CO3	07

	c	Explain the significance of flexural and compressive strength in assessing the structural performance and durability of concrete elements.	L2, CO3	08
Module-4				
Q.07	a	Explain the various stages of production of concrete.	L2, CO4	10
	b	Explain the key factors influencing the selection and operation of batching plants for various construction projects.	L2, CO4	06
	c	Define RMC. Discuss its advantages.	L2, CO4	04
OR				
Q.08	a	Explain the techniques adopted for levelling, vibration, and compaction of freshly placed concrete at construction sites.	L2, CO4	10
	b	Discuss the importance of achieving proper compaction to eliminate voids and ensure structural integrity.	L2, CO4	05
	c	Elaborate on the finishing and curing processes involved in protecting newly placed concrete from premature drying and cracking.	L2, CO4	05
Module-5				
Q.09	a	Discuss the properties and applications of self-compacting concrete (SCC) compared to traditional concrete.	L2, CO5	06
	b	Explain the key characteristics and applications of mass concrete.	L2, CO5	06
	c	Explain the composition, properties, and environmental benefits of Geopolymer concrete.	L2, CO5	08
OR				
Q.10	a	Discuss the characteristics and applications of pavement quality concrete (PQC) in road construction and rehabilitation projects.	L2, CO5	06
	b	Discuss the types of fibers used in FRC and their applications.	L2, CO5	08
	c	Describe the composition and properties of composite concrete materials in construction applications.	L2, CO5	08