CBCS SCHEME

USN

BCV405C

Fourth Semester B.E./B.Tech. Degree Examination, June/July 2024

Concreting Techniques and Practices

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.
3. Use of code book IS 10262-2019 for mix design problem is permitted.

		Module – 1	**M**	**L**	**C**
Q.1	**a.**	Mention different types of cement. Explain briefly.	**10**	**L2**	**CO1**
	b.	Explain the following : i) Fly ash ii) Silica fumes iii) Rice husk ash iv) GGBS.	**10**	**L2**	**CO1**
		OR			
Q.2	**a.**	Enumerate and explain the properties of aggregates for concrete.	**10**	**L3**	**CO1**
	b.	Explain the various tests conducted on Recycled concrete aggregate.	**10**	**L2**	**CO1**
		Module – 2			
Q.3	**a.**	Explain briefly : i) Super plasticizer ii) Accelerators	**10**	**L2**	**CO2**
	b.	Explain the qualities of water used for manufacture of concrete specify the limits.	**10**	**L2**	**CO2**
		OR			
Q.4	**a.**	Mention the necessity of aggregate blending and briefly explain any one method of blending.	**10**	**L1**	**CO2**
	b.	Draw gradation curve and determine Fineness modulus of aggregate from following particular.	**10**	**L3**	**CO2**

Sieue size (mm)	25	19	12.5	9.5	4.75	2.36	Pan
Mass Retained (gms)	0	405	2850	2435	2030	375	35

		Module – 3			
Q.5		Design a concrete mix for M25 a) Grade designation – M25 b) Type of cement – OPC43 c) Max Nominal size of Aggregate – 20mm d) Min cement content – 300Kg/m^3 e) Water cement Ratio – 0.50 f) Workability – 75mm slump g) Exposure condition – moderate (RCC) h) Max.cement content – 450Kg/m^3 i) Chemical admixture – Nil j) F.A zone – Zone 2 k) S.G of cement – 3.15 l) C.A : SG – 2.80 m) C.A : water absorption – 1% n) F.A : SG – 2.65 o) F.A : Water absorption – 2%	**20**	**L3**	**CO3**

		OR			
Q.6	**a.**	List and explain factors affecting workability.	**10**	**L2**	**CO3**
	b.	Define slump of concrete, explain procedure to determine slump of concrete using slump cone method.	**10**	**L2**	**CO3**
		Module – 4			
Q.7	**a.**	With neat sketch, explain component of batching plant.	**10**	**L1**	**CO4**
	b.	What are the methods of transportation of concrete used to produce good concrete? Explain.	**10**	**L2**	**CO4**
		OR			
Q.8	**a.**	Explain the different methods of concrete curing and define curing of concrete.	**10**	**L2**	**CO4**
	b.	Enumerate necessity of R.M.C with advantages and disadvantages.	**10**	**L2**	**CO4**
		Module – 5			
Q.9	**a.**	List the types of fibres used in F.R.C and discuss the factors affecting properties of F.R.C	**10**	**L2**	**CO5**
	b.	What is S.C.C (Self Compacting Concrete]? Explain the properties of S.C.C.	**10**	**L1**	**CO5**
		OR			
Q.10	**a.**	Write a note on : i) Geo polymer concrete ii) High performance concrete	**10**	**L2**	**CO5**
	b.	Mention the types of Shrinkage and factors affecting Shrinkage.	**10**	**L2**	**CO5**

* * * * *