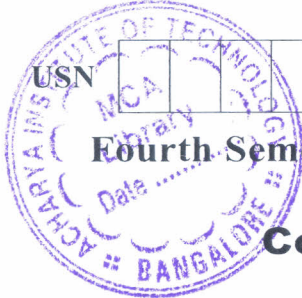


# CBCS SCHEME



BCV405C

**Fourth Semester B.E./B.Tech. Degree Supplementary 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 IS-10262-2019 and IS-456-2000 code books are allowed.*

Module – 1			M	L	C
Q.1	a.	Mention different types of cement.	10	L1	CO2
	b.	Explain the following : i) Fly ash and its effects on concrete ii) Rice Hush Ash	10	L2	CO2
<b>OR</b>					
Q.2	a.	Name the different tests on cement. Explain any two test on cement.	10	L1	CO1
	b.	Briefly explain the tests conducted on fine aggregates. i) Sieve Analysis      ii) Specific Gravity test.	10	L2	CO1
<b>Module – 2</b>					
Q.3	a.	Explain the role of admixture in concrete techniques.	10	L2	CO2
	b.	Explain briefly the action of accelerate and superplasticizers in the concrete. Also name any two accelerators used in industry.	10	L2	CO2
<b>OR</b>					
Q.4	a.	Name the importance of aggregate in concrete.	06	L1	CO1
	b.	What is blending of aggregates? Explain methods of blending and its consideration during blending process.	07	L2	CO1
	c.	Explain the steps in gradation optimization with example.	07	L2	CO1
<b>Module – 3</b>					
Q.5	a.	What is volumetric mix design? Explain the steps in volumetric mix design as per IS code.	10	L2	CO2
	b.	Explain factors influencing choice of mix design as IS 10262.	10	L2	CO2
<b>OR</b>					
Q.6		Design a concrete mix for M20 grade of concrete with the following design stipulation as per IS 10262-2019 guide lines: a. Grade designation : M20 b. Type of cement : Ultra Tech PPC c. Maximum size of aggregate : 20mm d. Minimum cement content : 320kg/m <sup>3</sup> e. Workability : 75mm slump f. Exposure condition : Mild g. Degree of supervision : Good h. Type of Aggregate : Crushed angular aggregate i. Max. Cement content : 450 kg/m <sup>3</sup> j. Chemical Admixture : Not recommended k. Specific gravity of cement : 3.05 l. Specific gravity of Coarse Aggregate : 2.68 m. Specific gravity of F.A : 2.66 n. Water Absorption      C.A : 0.85% F.A : 1.15%	20	L3	CO3

Module – 4					
Q.7	a.	What is the difference between weigh batching and volume batching?	06	L1	CO4
	b.	Explain the methods of mixing in concrete production.	07	L2	CO4
	c.	Why compaction is required to concrete? Explain compaction methods by vibration.	07	L2	CO4
OR					
Q.8	a.	Why curing is needed to concrete? Explain curing methods.	10	L2	CO4
	b.	What is RMC? How its manufactured? Explain briefly.	10	L2	CO4
Module – 5					
Q.9	a.	What is self compacting concrete? Explain the materials required for self compacting concrete used.	10	L2	CO4
	b.	What is light weight concrete? Name the aggregates used as light weight aggregate? Explain its property.	10	L2	CO4
OR					
Q.10	a.	Explain the fiber types used in fibre reinforced concrete.	05	L2	CO4
	b.	Write a short notes on :	10	L2	CO4
		i) Geopolymer concrete      ii) Ferrocement			
c.	What is guniting? Explain steps in guniting process.	05	L2	CO4	

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