

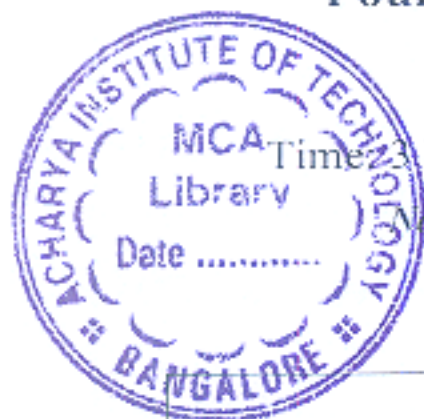
USN

--	--	--	--	--	--	--	--	--	--

BCV405C

Fourth Semester B.E./B.Tech. Degree Examination, June/July 2025

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.	Explain the manufacturing process of cement by dry process along with flow chart.	10	L2	CO1
	b.	Enlist different types of cements and explain about quick setting cement.	10	L2	CO1
OR					
Q.2	a.	What are mineral admixtures? Explain about flyash and GGBS.	10	L2	CO1
	b.	Explain the procedure of determination of fineness of flyash.	10	L2	CO1
Module – 2					
Q.3	a.	Explain the role of admixtures in concrete. What are different types of admixtures and explain about retarders.	10	L4	CO2
	b.	Explain the qualities of water used for manufacturing of concrete, specify the limits.	10	L4	CO2
OR					
Q.4	a.	Illustrate the importance of proper blending of fine and coarse aggregates.	10	L4	CO2
	b.	Explain the importance of size, shape, texture with respect to coarse aggregates.	10	L4	CO2
Module – 3					
Q.5		Design a concrete mix for M30. a) Grade designation – M30 b) Type of cement – OPC 43 c) Max nominal size of aggregate – 20 mm d) Minimum cement content – 300 kg/m ³ e) Water cement ratio – 0.50 f) Workability – 50 mm slump g) Exposure condition – moderate (RCC) h) Maximum cement content – 450 kg/m ³ i) Chemical admixture – Nil j) Fine aggregate zone – zone 2 k) Specific gravity of cement – 3.15 l) Coarse aggregates : specific gravity – 2.8 m) Coarse aggregates : water absorption – 1% n) Fine aggregates : specific gravity – 2.65 o) Fine aggregates : water absorption – 2%	20	L3	CO3

OR

Q.6	a.	Define workability of concrete. Mention the laboratory tests conducted to measure workability of concrete. With a neat sketch explain about compaction factor test.	10	L3	CO3
	b.	Illustrate the properties and applications of high performance concrete.	10	L3	CO3

Module – 4

Q.7	a.	Mention the various stages involved in manufacturing of concrete. Discuss them in brief.	10	L3	CO4
	b.	Discuss the importance of curing, what are the methods of curing? Explain any one in detail.	10	L1	CO4

OR

Q.8	a.	What are the methods of transportation of concrete used for making good quality of concrete? Explain in brief.	10	L3	CO4
	b.	Explain the techniques adopted for compaction of freshly placed concrete at construction site.	10	L1	CO4

Module – 5

Q.9	a.	Discuss the following: i) Plastic shrinkage cracks ii) Honey combing	10	L1	CO4
	b.	Explain : i) Geopolymer concrete ii) Light weight concrete	10	L1	CO4

OR

Q.10	a.	Discuss the following: i) Shotcreting ii) Grouting	10	L1	CO4
	b.	Explain : i) Self compacting concrete ii) Fibre reinforced concrete.	10	L1	CO4
