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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, NOVEMBER - 2025

CONCRETE TECHNOLOGY

Use of IS 10262:2019 shall be permitted in the examination hall

[Maximum marks: 75] [Time: 3 Hours]

PART A

I. Answer all the following questions in one word or one sentence. Each question carries 1 mark.

(9 x 1 = 9 Marks)

		Module outcome	Cognitive level
1	The chemical ingredient of cement which provides quick setting property to the cement is ……	M1.01	R
2	Le – Chatelier apparatus is used to perform ……	M1.02	R
3	In the designation of M20 concrete, M refers to ……	M2.01	R
4	The separation of water or water – cement mixture from freshly mixed concrete is known as ……	M2.02	R
5	…… joints are the temporary joints left between subsequent concreting operations.	M2.04	R
6	The grade of concrete corresponding to nominal mix proportions of 1:1.5:3 is ……	M3.03	R
7	The compressive strength of M30 grade concrete is …….	M3.03	R
8	Any concreting operation done at a temperature below 5 degree C is termed ……	M4.04	R
9	List any two mineral admixtures.	M4.01	R

PART B

II. Answer any eight questions from the following. Each question carries 3 marks.

(8 x 3 = 24 Marks)

		Module outcome	Cognitive level
1	List Bougue's compounds of ordinary cement.	M1.01	R
2	Distinguish between fine aggregate and coarse aggregate.	M1.03	U
3	Explain quick setting cement.	M1.01	U
4	Distinguish between volume batching and weigh batching.	M2.03	U
5	List any six methods adopted for transportation of concrete.	M2.03	R
6	Explain variance and standard deviation in mix design.	M3.01	U
7	Explain ultra sonic pulse velocity method.	M3.03	U

8	Explain air entraining admixture.	M4.01	U
9	List three situations where special care is to be taken while concreting.	M4.03	R
10	Write a note on light weight concrete.	M4.02	U

PART C

Answer all questions. Each question carries seven marks.

(6 x 7 = 42 Marks)

		Module outcome	Cognitive level
III	Explain the laboratory test to determine the standard consistency of cement.	M1.02	U
	OR		
IV	Describe the quality of water used for concreting.	M1.04	U
V	List the tests for workability and explain slump test.	M2.02	U
	OR		
VI	List and explain different types of joints in concrete.	M2.04	U
VII	Explain bleeding and its preventive methods.	M2.02	U
	OR		
VIII	Define durability of concrete. List the factors affecting durability of concrete.	M2.02	R
IX	List the basic data required for the design of concrete mix.	M3.01	R
	OR		
X	Explain the procedure to determine the compressive strength of concrete cubes.	M3.03	U
XI	Explain the various steps involved in design of concrete mix by I.S. method.	M3.03	U
	OR		
XII	Explain the materials for water proofing.	M3.04	U
XIII	Write short note on mass concrete.	M4.02	U
	OR		
XIV	Explain the precautions to be taken in hot weather concreting.	M4.04	U

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