

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2023**

CONCRETE TECHNOLOGY

[Maximum Marks: 75]

[Time: 3 Hours]

PART-A

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

(9 x 1 = 9 Marks)

		<small>Module Outcome</small>	<small>Cognitive level</small>
1.	The apparatus used to perform Consistency test is.....	M1.02	R
2.	The ingredient added to regulate Setting time of cement is.....	M1.01	R
3.	The ingredient contributing grey colour to cement is.....	M1.01	R
4.	Slump test is used to check.....of fresh concrete.	M2.02	R
5.	Measurement of materials for making concrete is called.....	M2.03	R
6.	The proportion 1:2:4 corresponds to..... grade of concrete.	M3.01	R
7.	For grade M 25 concrete, the characteristic compressive strength at 28 days will be.....N /mm ² .	M3.01	R
8.	Tremie method is used for.....concreting.	M4.04	R
9.	Vibration is not necessary forconcrete.	M4.02	R

PART-B

II. Answer any *eight* questions from the following. Each question carries 'three' marks.

(8 x 3 = 24 Marks)

		<small>Module Outcome</small>	<small>Cognitive level</small>
1.	List the names of three types of cement.	M1.01	R
2.	Explain classification of aggregate based on size.	M1.03	U
3.	Describe the importance of quality of water used for concreting.	M1.04	U
4.	Explain Duff Abram's water cement ratio law.	M2.02	U
5.	Explain bleeding and causes of bleeding.	M2.02	U
6.	List any three situations which necessitates waterproofing.	M3.04	R
7.	List any six methods for concrete mix design.	M3.02	R
8.	List the factors influencing the choice of mix proportions.	M3.01	R
9.	Define concrete mix design.	M3.01	R
10.	Describe Light weight concrete.	M4.02	U

PART-C

Answer all questions from the following. Each question carries 'seven' marks.

(6 x 7 = 42 Marks)

		Module Outcome	Cognitive level
III.	Describe the various ingredients of cement with their percentage and functions. OR	M1.01	U
IV.	Describe aggregate classification based on shape. Also explain the significance of different shaped aggregates.	M1.03	U
V.	Explain compaction factor test for workability. OR	M2.02	U
VI.	Explain segregation. What are the preventive measures to control segregation?	M2.02	U
VII.	Describe different methods of curing. OR	M2.03	U
VIII.	Describe workability. What are the factors affecting workability?	M2.02	U
IX.	Show the procedural steps of mix design of concrete as per IS method. OR	M3.02	A
X.	Explain the purpose of concrete mix design.	M3.01	U
XI.	Differentiate between High Performance Concrete and High Strength Concrete. OR	M4.02	U
XII.	Describe the precautions to be taken in cold weather concreting.	M4.03	U
XIII.	Describe any three different admixtures used in concrete. OR	M4.01	U
XIV.	Explain the characteristics of Fibre Reinforced Concrete. Also, list different fibres used in Fibre Reinforced concrete.	M4.02	U
