

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**Regular End Semester Examination – Summer 2022**

**Course: B. Tech.      Branch : Civil Engineering      Semester :7<sup>th</sup> Sem**

**Subject Code & Name: BTCVC 702 Infrastructure Engineering**

**Max Marks: 60**

**Date: 18/08/2022**

**Duration: 3.45 Hr.**

**Instructions to the Students:**

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

	(Level/ CO)	Marks
<b>Q. 1 Solve Any Two of the following.</b>		
A) Illustrate the term permanent way and Explain the Components of a permanent way.	CO1	6
B) Write a short note on Fixture and Fastening.	CO1	6
C) State necessity for geometric design of railway track.	CO2	6
<b>Q.2 Solve Any Two of the following.</b>		
A) Define the following terms: a) Coning of wheel b) Adzing of sleeper c) Tilting of Rails d) Station Yard	CO2	6
B) Draw layout for simple turnout and explain the components of Turnout.	CO2	6
C) Enlist Types of Station and explain it in-details.	CO2	6
<b>Q. 3 Solve Any Two of the following.</b>		
A) Describe the full face method of Tunneling in hard rock, with neat sketch.	CO2	6
B) Sketch the various types of tunnels cross-section. State under what conditions each is adopted.	CO2	6
C) Explain any four types of explosives used in tunnel construction.	CO2	6
<b>Q.4 Solve the following.</b>		
A) State factors affecting on site selection for docks and harbor.		6
B) Write a short note on Inland Water Transport in India.		6
<b>Q. 5 Solve Any one of the following.</b>		
A) What are the different stages of bridge planning and Write a short note on standard specification of bridge.		12
B) What is Airport and explain the characteristics of Aircraft and Explain parallel runways with its sketches.		12

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