

Code: 19CE4701C

**IV B.Tech - I Semester – Regular Examinations - DECEMBER 2022**

**TRANSPORTATION INFRASTRUCTURE  
ENGINEERING  
(CIVIL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

- Note: 1. This question paper contains two Parts A and B.  
 2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.  
 3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.  
 4. All parts of Question paper must be answered in one place.

BL – Blooms Level

CO – Course Outcome

**PART – A**

		BL	CO
1. a)	Explain the role of various components of permanent way.	L2	CO1
1. b)	What are the various types of yards?	L1	CO2
1. c)	What are the types of runway lighting?	L1	CO3
1. d)	What are the requirements of a good harbor?	L1	CO4
1. e)	Describe any four different urban rail-transits in India.	L2	CO5

**PART – B**

			BL	CO	Max. Marks
<b>UNIT-I</b>					
2	a)	Discuss any five factors affecting the selection of a good alignment of a railway	L2	CO1	6 M

		track.			
	b)	Explain the requirements of ideal permanent way.	L2	CO1	6 M
<b>OR</b>					
3	a)	Write the different sleepers required for railway projects.	L1	CO1	6 M
	b)	Explain with neat sketches any four obligatory points of controlling railway alignment.	L2	CO1	6 M
<b>UNIT-II</b>					
4	a)	Explain different types of railway signals according to their operational characteristics. With the help of neat sketch explain the essential features and working principle of a Semaphore type signal.	L2	CO2	8 M
	b)	Explain necessities of signaling system.	L2	CO2	4 M
<b>OR</b>					
5	a)	What is a Station? What are the different types of stations and its functions?	L1	CO2	8 M
	b)	What is meant by platform? Discuss the various types of platforms.	L2	CO2	4 M
<b>UNIT-III</b>					
6	a)	List the factors to be considered for the selection of site for a commercial airport.	L1	CO3	6 M
	b)	Explain the importance of airport planning.	L2	CO3	6 M
<b>OR</b>					

7	a)	What are the facilities to be provided in the terminal building of an international airport?	L1	CO3	6 M
	b)	Explain in detail about various airport markings with neat sketches.	L2	CO3	6 M
<b>UNIT-IV</b>					
8	a)	What is a “Harbour”? What are the types of harbours available? Explain with the help of neat sketches.	L2	CO4	6 M
	b)	Explain different types of breakwater structures with suitable sketches.	L2	CO4	6 M
<b>OR</b>					
9	a)	Define floating beacon and explain the different types of floating beacons.	L2	CO4	6 M
	b)	Explain different types of fenders.	L2	CO4	6 M
<b>UNIT-V</b>					
10	a)	Explain the factors influencing Bus Network planning.	L2	CO5	6 M
	b)	Explain in detail about the transit network planning.	L2	CO5	6 M
<b>OR</b>					
11	a)	What is public transport network?	L1	CO5	4 M
	b)	Write the advantages of mass transit system in transportation.	L1	CO5	8 M