

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Fourth Semester

Civil Engineering

CE3405 – Highway and Railway Engineering

Regulations – 2021

Duration : 3 Hrs

Maximum : 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	Name the different types of roads.	RE	1	2
2.	Define Indian Road Congress (IRC).	RE	1	2
3.	Draw and List elements of cross section of road.	AN	2	2
4.	List the factors to be considered for pavement design.	UN	2	2
5.	What are the objectives of highway lighting.	RE	3	2
6.	Categorize the machineries used for road work.	AN	3	2
7.	Classify Indian railways by regions.	AN	4	2
8.	Explain different gauges used in Indian railways.	UN	4	2
9.	State the importance of track maintenance.	UN	5	2
10.	What are the causes of creep on rails.	RE	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Explain briefly the history of road development in India.	UN	1	13
	Or			
	b i List the factors influencing the highway alignment.	UN	1	5
	ii Demonstrate the procedure of various engineering surveys required for locating a new highway.	UN	1	8
12.	a Calculate the stopping sight distance on a highway whose design speed is 100kmph and the highway is on a 3% down grade. Assume any relevant data needed.	AP	2	13
	Or			
	b Identify the details of survey conducted for road construction in the hilly region.	AP	2	13

13.	a	Construct low-cost road with necessary features.	UN	3	13
Or					
	b	Examine the different tests to confirm the quality of bituminous road construction.	UN	3	13
14.	a	Explain about the elements of permanent way in rail planning and construction.	UN	4	13
Or					
	b	Illustrate with neat sketches of different joints in rails.	UN	4	13
15.	a	Explain in details the role of Indian railways in the overall nation development.	AP	5	13
Or					
	b	Distinguish between railway station and yard with neat sketches.	AP	5	13

*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	Identify the different modes of public transportation in detail.	AP	1	15
Or					
	b	Classify sleepers used in Indian railways with neat sketches.	AP	4	15