R20 Regulation *Subject code: 3E5AA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech V Semester Supplementary Examinations, April 2026

TRANSPORTATION ENGINEERING

(CE)

Maximum Marks: 70 Date: 24.04.2026 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	List the objectives of preliminary survey?	2M	1	L1
2	What are the classification of Roads?	2M	1	L1
3	What is skid resistance?	2M	2	L1
4	What is Camber?	2M	2	L1
5	What is meant by Traffic Density in traffic engineering?	2M	3	L1
6	Write about spot speed studies?	2M	3	L1
7	What do you understand by the term at grade intersection?	2M	4	L1
8	What are the various types of traffic islands?	2M	4	L1
9	What are the different factors for failure of pavements?	2M	5	L1
10	What are the stresses in flexible pavement?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Briefly outline the highway development in India.	10M	1	L2
	OR			
12	Explain about the basic requirements of an ideal alignment.	10M	1	L2
13	What are the various factors controlling the geometric elements of a highway?	10M	2	L2
	OR			
14	Calculate the stopping sight distance for design speed of 50 kmph for two-way traffic on a two lane road. Assume coefficient of friction as 0.35 and reaction time of driver as 2.5 seconds.	10M	2	L2
15	Write about traffic volume studies and explain how the data is collected and presented in traffic engineering?	10M	3	L2
	OR			
16	Discuss the relation between parameters of Traffic-Volume, Speed and Density.	10M	3	L2

17	Write about rotary intersection. What are the design factors to be considered in the design of traffic rotary?	10M	4	L2
	OR			
18	What is Channelization? Explain the importance with its advantages and disadvantages.	10M	4	L2
19	With neat sketch show the different components of flexible pavement and mention the functions of each.	10M	5	L2
	OR			
20	Write the design procedure of rigid pavements as per IRC.	10M	5	L2