



Regulation R18 Subject code: 2P5AC
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech V Semester Supplementary Examinations, February 2024

Transportation Engineering
(Civil Engineering)

Maximum Marks: 70

Date: 20.02.2024 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 which carries 10M.
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)	CO	Bloom Tx
1	What are the objectives of highway planning?		1	L1
2	Draw neat sketches of various road patterns.		1	L2
3	List out various Highway Cross-section elements.		2	L1
4	What is Camber and explain its need on highway?		2	L1
5	What are the different types of traffic signal systems?		3	L1
6	What is the need for road markings?		3	L1
7	Define intersection?		4	L1
8	What is Channelization?		4	L1
9	What are the different pavement components?		5	L1
10	Write about wheel load stresses of rigid pavement.		5	L1

Part-B

Answer All the following questions.		(10MX 5=50Marks)		
11	What are the salient features of Bombay Road Development Plan? How it differs from Nagpur Plan? [10M]		1	L1
OR				
12	What are the different plans to be prepared after planning surveys are carried out? [10M]		1	L1
13	What are the various factors controlling the geometric elements of a highway? [10M]		2	L1
OR				
14	Calculate the minimum sight distance required to avoid a head-on collision of two cars approaching from the opposite direction at 90 and 60 kmph respectively. Assume coefficient of friction as 0.7 and brake efficiency of 50% in both the cases, reaction time of driver as 2.5 seconds. [10M]		2	L3
15	A. Explain about speed and delay study. [5M] B. What are the different methods of conducting speed and delay studies? [5M]		3	L2 L1
OR				
16	Explain various types of traffic signs with neat sketches. [10M]		3	L2

17	A. What is traffic rotary? [5M] B. What are its advantages and limitations, in particular reference to traffic conditions in India? [5M]	4	L1 L1
	OR		
18	What are various types of Grade separated Intersections and explain them with neat sketches? [10M]	4	L2
19	What are the general causes of pavement failures? Explain. [10M]	5	L1
	OR		
20	Explain the construction of Flexible pavements. List out the design elements of flexible pavements. [10M]	5	L2