



Regulation R18

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

Subject code: 2P5AC

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

B.Tech V Semester Supplementary Examinations, January 2023

Transportation Engineering

(CE)

Maximum Marks: 70

11/1/23

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)

- 1 What is highway alignment?
- 2 Discuss the classification of Roads.
- 3 List out various Highway Cross-section elements.
- 4 What is Camber and explain its need on highway?
- 5 What are the different types of traffic signal systems?
- 6 What is the need for road markings?
- 7 What are the requirements of at grade Intersection?
- 8 What are the impacts on intersection with respect to safety?
- 9 What are the different functions of Pavement?
- 10 What are the stresses developed in the Rigid and Flexible pavements?

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 Explain in detail about Road development plans in India? [10]
- OR
- 12 What are the different plans to be prepared after planning surveys are carried out? [10]
- OR
- 13 What are the various factors controlling the geometric elements of a highway? [10]
- 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. [10]
- OR
- 15 A. Explain about speed and delay study. [5]
B. What are the different methods of conducting speed and delay studies? [5]
- OR
- 16 A. Distinguish between collision and condition diagrams? [5]
B. Explain different measures to be adopted for the reduction of accidents. [5]

17 What are the design factors that control the design of rotary intersection and explain them in detail? [10]

OR

18 Show few typical patterns of un-channelized and channelized intersections with neat sketches. [10]

19 What are the various types of flexible pavement failures? Explain briefly. [10]

OR

20 What are the differences between Flexible and Rigid Pavements? [10]