Regulation R18 *Subject code: 2P5AC*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, June/July 2023

Transportation Engineering

(Civil Engineering)

Maximum Marks: 70 Date:28.06.2023 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 are the various requirements of an ideal highway alignment?
2 What are the engineering surveys to be carried out before planning a highway system?
3 What is skid resistance?
4 What are the objectives of highway geometric design?
5 Define Traffic volume.
6 List out various measures that may be taken to prevent accidents?
7 Mention various advantages of rotary intersection?
8 What do you understand by the term "Grade separated intersection"?
9 What is rutting of a Flexible Pavement?
10 On what factors does the selection of base and surface course depend upon?

Part-B

Answer All the following questions. (10MX 5=50Marks)

11 Explain the Third twenty year road plan and its objectives. [10]

OR

12 What are the various methods of classifying roads? Briefly outline the classification based on location and function as suggested in Nagpur Road Plan. [10]
13 What are the methods used for computing the length of Transition curve? [10]

OR

14 Find out the length of transition curve for the following data.
Radius of horizontal curve =400m. Design speed = 100kmph, length wheel base = 6.2m, number of lanes = 2 location at the rain fall = heavy, terrain condition = hilly, super elevation is introduced by rotating the edges with reference to centre line and the rate of introduction of super elevation is 1 in 150. Width of highway is 7m. [10]
15 Explain the design procedure of Traffic signals according to Webster method? [10]

OR

16 Briefly explain about different types of road traffic signs with specifications? [10]

17 Write in detail about different types of Interchanges. [10]

OR

18 Explain about classifications of at-grade intersections. [10]
19 Write design procedure for flexible pavements as per IRC. [10]

OR

20 Explain about the different types of stresses that need to be considered in Rigid Pavements. [10]