

Code No: 155DJ

R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, January - 2025

TRANSPORTATION ENGINEERING

(Civil Engineering)

Time: 3 Hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

**PART – A**

**(25 Marks)**

- 1.a) Write any two salient features of Jayakar committee. [2]
- b) Briefly outline the highway development in India. [3]
- c) What are the objects of highway geometric design? [2]
- d) Distinguish between lag distance and breaking distance. [3]
- e) Explain the term traffic volume. [2]
- f) What is traffic rotary? [3]
- g) Define angularity number. [2]
- h) Define viscosity of bitumen. [3]
- i) Define tack coat. [2]
- j) Write short note on surface dressing. [3]

**PART – B**

**(50 Marks)**

2. Define the term alignment. What are the factors consider while aligning a road? [10]
- OR**
3. Discuss briefly about the PPP schemes of highway development in India? Describe. [10]
4. Derive the equation for overtaking sight distance. [10]
- OR**
5. Calculate the length of transition curve to be provided on a national highway for a design speed of 90 kmph? Assume suitable data. [10]
6. Define road safety audit. Discuss the different measures to be considered in road accident studies. [10]
- OR**
7. Explain the concept of Level of Service (LOS). [10]
8. How do you determine the CBR value of soils? What are the prescribed limits of CBR as per IRC? [10]
- OR**
9. Discuss the procedure for softening point on Bituemen. [10]
10. Briefly outline the IRC recommendations for determining the thickness of the cement concrete pavement. [10]
- OR**
11. Explain briefly different types of stresses in rigid flexible pavement. [10]