

R18

Code No: 155DJ

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, March - 2024

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) Discuss about key map and index map. [3]
- c) Define stopping sight distance. [2]
- d) Distinguish between lag distance and breaking distance. [3]
- e) Write short note on level of service. [2]
- f) Differentiate between parking index and parking turnover. [3]
- g) What is meant by weathering resistance? [2]
- h) Define viscosity of bitumen. [3]
- i) Write about wheel load stresses of rigid pavement. [2]
- j) Write short note on surface dressing. [3]

PART - B

(50 Marks)

2. Briefly explain about the current road development plans in India. [10]

OR

3. What are the various surveys to be carried out before planning a highway system for a given area? [10]

4. Derive an expression for computing overtaking sight distance on a two way road. Support your answer with a neat sketch showing overtaking process. [10]

OR

5. Calculate the length of transition curve for a design speed of 80 kmph at horizontal curve of radius 300m in a rural area. Assume suitable data? [10]

6. Discuss briefly about the warrants for signalization. [10]

OR

7. Write a short note on on-street and off-street parking facilities. [10]

8. Explain the test procedure for determining California Bearing Ratio value of soil. [10]

OR

9. Write a short note on Rothfuch's method. [10]

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10. State the stepwise recommended design procedure for rigid pavements for highways.

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11. Write a short note on wheel load stresses. Explain ESWL.

[10]

[10]

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