



MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC Act, 1956

III B.Tech I Sem Supply End Examination, December 2022

Transportation Engineering

(CIVIL)

Time: 3 Hours.**Max. Marks: 70**

Note: 1. Question paper consists: Part-A and Part-B.

2. In Part – A, answer all questions which carries 20 marks.

3. 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

(10*2 Marks = 20 Marks)

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|--|----|-----|-----|
| 1. a) List out the characteristics of road transport. | 2M | C01 | BL1 |
| b) Mention any two current road development plan in India. | 2M | C01 | BL1 |
| c) Define camber. | 2M | C02 | BL1 |
| d) What do mean by right-of-way? | 2M | C02 | BL2 |
| e) Define running speed. | 2M | C03 | BL1 |
| f) How highway capacity is influenced by level of service? | 2M | C03 | BL2 |
| g) Define specific gravity. | 2M | C04 | BL1 |
| h) What are the desirable properties of soil as road material? | 2M | C04 | BL2 |
| i) What are the different types of pavements? | 2M | C05 | BL1 |
| j) What is dowel bar? | 2M | C05 | BL1 |

PART- B

(10*5 Marks = 50 Marks)

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|---|----|-----|-----|
| 2 a) Explain about the importance of Highways in detail. | 5M | C01 | BL2 |
| b) State the different type of Engineering Surveys to be conducted for Highway Alignment. | 5M | C01 | BL2 |

OR

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|--|----|-----|-----|
| 3 a) Discuss the role of IRC in the development of roads. | 5M | C01 | BL3 |
| b) Explain any one 20 year road development plan. | 5M | C01 | BL3 |
| 4 a) What are Sight distance and its types? Explain Stopping Sight Distance. | 5M | C02 | BL2 |
| b) Why extra widening is needed on curves? | 5M | C02 | BL2 |

OR

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|---|----|-----|-----|
| 5 a) Define Super elevation and its importance. | 5M | C02 | BL3 |
| b) Explain about overtaking sight distance. | 5M | C02 | BL3 |

- 6 a) Discuss in detail about the various traffic studies. 5M C03 BL3
 b) What are the advantages and disadvantages of traffic sign? 5M C03 BL1

OR

- 7 a) Define level of service. Explain with the aid of figure. 5M C03 BL3
 b) What are the various types of traffic signs? Describe any one. 5M C03 BL1

- 8 a) Explain the procedure to conduct the CBR test on soil 5M C04 BL4
 b) How crushing value of aggregate is determined in laboratory? Describe 5M C04 BL4

OR

- 9 a) Describe how impact value of aggregate is found in laboratory. 5M C04 BL4
 b) Explain the procedure for finding the attrition value of aggregate. 5M C04 BL4

- 10 a) Compare Flexible pavement with rigid pavement. 5M C05 BL2
 b) Draw the cross section of a rigid pavement and specify the salient parts. 5M C05 BL3

OR

- 11 a) What are the factors to be considered while design a flexible pavement? 5M C05 BL2
 b) Write the rigid pavement design procedure as per IRC 58-2015 5M C05 BL3

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CO - Course Outcome

BL - Blooms Taxonomy Levels