

Register No.: ..... Name: .....

**SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)**

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

**FIFTH SEMESTER B.TECH DEGREE EXAMINATION (Regular), DECEMBER 2022****(2020 SCHEME)****Course Code : 20CET393****Course Name: Transportation Systems Management****Max. Marks : 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. Explain the concept of congestion pricing.
2. Discuss the need for Transportation System Management.
3. Briefly explain the transit management improvement measures.
4. Discuss the issues related to transit and para transit integration.
5. Explain the term accessibility index.
6. Explain the significance of route alignment in bus route network planning and management.
7. Discuss the advantages of bicycle transportation.
8. List the design considerations for planning proper bicycle facilities for an urban area.
9. Compare LRT and MRT.
10. Explain the characteristics of a conventional transit system.

**PART B*****(Answer one full question from each module, each question carries 14 marks)*****MODULE I**

11. a) Discuss the relevance of TSM actions in Indian context. (5)
- b) Explain the concept of staggered and flexible work hours. (4)
- c) Explain traffic calming measures in urban areas. (5)

**OR**

12. a) Explain the objectives of TSM. (4)
- b) Explain any four measures for improving vehicular flow. (10)

**MODULE II**

13. a) Explain the concept of Multi-Modal Coordination. (6)
- b) Explain the travel impact and benefits of car pooling. Discuss its applicability in Indian traffic conditions. (8)

**OR**

14. a) Describe the evaluation criteria of high occupancy vehicle priority. (7)  
b) Explain the service characteristics of transit operations. (7)

**MODULE III**

15. a) List and explain the different types of bus routes under network planning strategies. (10)  
b) Explain the strategies adopted for fixing suitable bus network for an urban area. (4)

**OR**

16. a) Explain the issues in route networks evaluation. (8)  
b) Explain bus route alignment methods. (6)

**MODULE IV**

17. a) Explain the measures adopted for promoting non-motorised modes of transport. (8)  
b) Explain the procedure to formulate Level of Service criteria for pedestrians. (6)

**OR**

18. a) Explain the pedestrian facilities and management measures provided in urban areas. (7)  
b) Discuss the junction treatments to be provided for laying bicycletracks. (7)

**MODULE V**

19. List and explain the features, advantages and disadvantages of any four advanced transit technologies. (14)

**OR**

20. a) Discuss the infrastructural facilities required for a properly planned electric transit vehicle system in a typical Indian city (7)  
b) Explain the characteristics of any two rapid transportation systems in India. (7)

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