

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
 B.Tech Degree S8 (R,S)(FT/PT) Examinations April 2026 (2019 Scheme)

Course Code: CET436
Course Name: TRANSPORTATION PLANNING

Max. Marks: 100**Duration: 3 Hours****PART A***Answer all questions, each carries 3 marks.*

Marks

- | | | |
|----|---|-----|
| 1 | Explain the land use-transportation interaction | (3) |
| 2 | Define an urban structure with an example | (3) |
| 3 | What are the goals and objectives of a transportation system? Give examples | (3) |
| 4 | List the various factors affecting travel demand. | (3) |
| 5 | List the factors to be considered while dividing the study area into zones | (3) |
| 6 | Describe how multiple linear regression is used to model trip production. | (3) |
| 7 | List out various growth factor methods with respective equations | (3) |
| 8 | Using a neat flow chart explain trip end mode split analysis | (3) |
| 9 | List out the steps involved in all-or-nothing assignment. | (3) |
| 10 | Write a note on comprehensive mobility plan | (3) |

PART B*Answer any one full question from each module, each carries 14 marks.***Module I**

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|----|--|------|
| 11 | What are the steps involved in transportation planning process? Explain with the help of a flow chart. | (14) |
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OR

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|----|--|-----|
| 12 | a) Explain the hierarchy of transportation facilities with respect to accessibility and mobility | (9) |
| | b) Write a note on detrimental effects of transportation on environment | (5) |

Module II

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|----|--|-----|
| 13 | a) What is trip generation? What are the basic factors that influence trip generation? Explain briefly | (9) |
| | b) | (5) |
| | Define and classify trips. Explain with examples. | |

OR

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|----|---|-----|
| 14 | a) Explain steps in urban travel demand modelling | (9) |
|----|---|-----|

- b) Give a detailed explanation of trip based and activity-based approaches (5)

Module III

- 15 a) Explain the theory of simple linear regression. What are the statistical measures to evaluate a regression model? (9)
 b) Describe the process of estimating trip generation by category analysis? (5)

OR

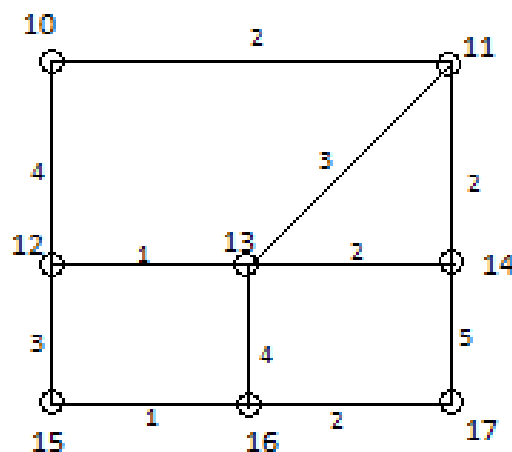
- 16 a) Explain the concept of zoning. Describe the method of zoning a study area. (9)
 b) Explain the factors affecting the selection of external cordon line. (5)

Module IV

- 17 a) Explain the concept of multipath assignment technique. (5)
 b) Explain the various trip distribution methods. (9)

OR

- 18 a) A network with nodes 10 to 17 is given below. The travel time of the links is also shown in the figure. Develop a minimum path tree from node 15 to all other nodes. (9)



- b) List out the steps involved in all-or-nothing assignment. Also, provide the advantages and disadvantages. (5)

Module V

- 19 a) Explain the structure of Lowry's model with a flow chart. Also, explain the features. (14)

OR

- 20 a) What are the non-transport solutions to transport problems? (9)
 b) Briefly discuss about any two applications of GIS in transportation planning (5)
