

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech S8 (Hons) Exam May 2020

Course Code: CE472**Course Name: TRANSPORTATION PLANNING**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer any two full questions, each carries 15 marks.*

Marks

- 1 a) What are the steps involved in transportation planning process? Explain with the help of a flow chart. (6)
- b) Write a note on the detrimental effects of transportation on environment. (5)
- c) Explain the land use-transportation interaction. (4)
- 2 a) What are the advanced transportation technologies? Describe with examples. (10)
- b) Write a note on comprehensive mobility plan. (5)
- 3 a) What are the economic and political roles of transportation? (7)
- b) What are the goals and objectives of a transportation system? Give examples. (8)

PART B*Answer any two full questions, each carries 15 marks.*

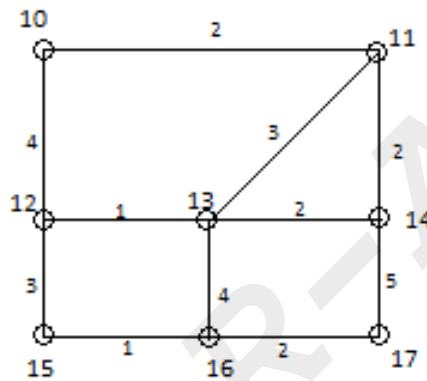
- 4 a) What is trip generation? What are the basic factors that influence trip generation? Explain briefly. (7)
- b) Define and classify trips. Explain with examples. (4)
- c) List out various growth factor methods with respective equations. (4)
- 5 a) What are the factors to be considered while defining a study area? (8)
- b) Give a detailed explanation of trip based and activity-based approaches. (7)
- 6 a) Explain the process of four-step planning with the help of a flow chart. (5)
- b) The distribution of present trips among the zones 1, 2 and 3 are given below. The expected future trips to be generated and attracted are 520, 1230 and 2150 respectively. Distribute the future trips among the zones by uniform growth factor method and average growth factor method. (One iteration in both). (10)

O/D	1	2	3
1	50	110	230
2	110	40	300
3	230	300	60

PART C

Answer any two full questions, each carries 20 marks.

- 7 a) What is traffic assignment? Explain any one method of traffic assignment. (10)
- b) What are the uses of diversion curves in traffic assignment? What are the different variables used for the construction of diversion curves with figures? (10)
- 8 a) List out the steps involved in all-or-nothing assignment. Also, provide the advantages and disadvantages. (10)
- b) 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. (10)



(Figure 1)

- 9 a) Explain the structure of Lowry's model with a flow chart. Also, explain the features. (10)
- b) What are the non-transport solutions to transport problems? (10)
