

B. Tech. 8th Semester Mid-Term Examination, 2018
TRANSPORTATION SYSTEMS AND PLANNING

Subject Code: 01 1X42

Time: 2 hours

Full Marks: 20

Instructions:

- (i) **Question No. 1 is compulsory.**
- (ii) **Attempt any three questions after question no. 2 onwards.**
- (iii) **Each question carries 5 marks.**

1. Chose the correct option or fill up the blank

(a) The first stage in the function of transportation engineering is:

- (i) Planning and design
- (ii) Collection of data
- (iii) Investigations
- (iv) Finance

(b) The main cause of accidents in urban areas is

- (i) Improper planning
- (ii) Extra wide roads
- (iii) Additional thickness of pavement
- (iv) Traffic congestion

(c) Which one is not a public transport mode

- (i) MRTS
- (ii) BRTS
- (iii) LRTS
- (iv) Car

(d) Which movement is useful for planning a bye pass

- (i) Internal to Internal
- (ii) Internal to External
- (iii) External to Internal
- (iv) External to External

(e) The Gravity Model for trip distribution gets its name from the fact that it is conceptually based on Newton's law of _____

(f) The imaginary line representing the boundary of the study area is termed as _____

2. A self-contained town consists of four residential areas A, B, C and two industrial estates X and Y. Generation equations show that, for the design year in question, trips from home to work generated by each residential area per 24-hour day as follows:

A	1000
B	2250
C	1750
D	3200

There are 3700 jobs in industrial estate X and 4500 in industrial estate Y. It is known that the attraction between zones is inversely proportional to the square of the journey times between zones. The journey times in minutes from home to work are:

Zones	X	Y
A	15	20
B	15	10
C	10	10
D	15	20

Calculate and tabulate the inter-zonal trips for journeys from home to work.

3. Describe briefly the different types of surveys that are usually carried out in transportation planning process.
4. Explain multiple linear regression technique with its formulation, assumptions, usefulness in trip generation process. Also, mention some of its disadvantages.
5. List out the various methods of trip distribution. What are the disadvantages of growth factors method.
6. List the different transportation service problems, problems in the domain affecting the transportation, problems in the domain affected by transportation.

BEST OF LUCK