

B.Tech.
(SEM 6) THEORY EXAMINATION 2017-18
TRANSPORTATION SYSTEM AND PLANNING

Time: 3 Hours

Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.

2 x 10 = 20

- a. What are the advantages of Railways ?
- b. What do you understand by mass rapid transit system.
- c. Explain the nature of Traffic Problems in cities ??
- d. What are the advantages of Railways ?
- e. Define intermediate public Transport (IPT).
- f. Define the term Modal Split ?
- g. Define travel Demand Management?
- h. Explain the term Trip Generation?
- i. What are the objectives carrying out an economic evaluation ?
- j. What are the two factors of present value method ?

SECTION B

2. Attempt any *three* of the following:

10 x 3 = 30

- a. Write Short Notes on any two :
 - i. Uninterrupted Traffic Flow
 - ii. Terminals
 - iii. Intersections of roads
- a. What are traffic stream variables ? Show the inter relationship among them graphically ?
- b. With reference to Trip generation explain multiple regression Analysis for Estimation ?
- c. A single lane road ,40km long is to be widened to two lanes at a cost of Rs 7 lakh per km , including all improvements. The cost of operation of vehicles on the single road is Rs 1.30 per vehicle km ,where as it is Rs 1 per km on the improved facility. The average traffic may be assumed to be 3000 vehicles per day over a design period of 20 years .The interest rate is 10 % per annum .The cost of maintenance is Rs 6000 per km on the existing road and Rs 12000 per km on the improved road. Is the improvement in the scheme is worthwhile.
- d. Discuss in brief the importance of off street parking facilities. Mention the various consideration to determine its location , types and sizes .

SECTION C

3. Attempt any *one part* of the following:

10 x 1= 10

- a. Explain the role of transport in economic and Social Activities ?
- b. Explain the role of transport in Environmental and political framework?

4. Attempt any *one part* of the following:

10 x 1= 10

- a. Explain in detail that Rapid ans Mass Transport System in mega cities of India is the need of time ?
- b. Enumerate the various types of IPT modes. Explain the characteristics and role played by IPT.

5. Attempt any *one part* of the following: 10 x 1= 10
- a. Enumerate factors influencing mode choice. Draw the flow chart showing the steps involved in different types of Modal split model.
 - b. What are the characteristics of long range and short range planning ?
6. Attempt any *one part* of the following: 10 x 1= 10
- a. What are the factors affecting Trip Generation ? Explain in brief.
 - b. Define traffic assignment ? Explain any one technique.
7. Attempt any *one part* of the following: 10 x 1= 10
- a. What are the IRC guidelines for designing of pedestrian and bicycle facilities in India ?
 - b. What are the various trip distribution methods ? Discuss about any one of them .