

# **BHAGWAN MAHAVIR COLLEGE OF ENGINEERING & TECHNOLOGY**

## **Sub: URBAN TRANSPORTATION SYSTEM**

### **ASSIGNMENT: 1. Introduction**

- 1) What are the roles of transportation in society? Describe economic and social role of transportation.
- 2) What is transportation planning? Which are the goals and objectives of transportation planning?
- 3) Explain by drawing flow chart various steps involved in transportation planning process.
- 4) Explain different levels of urban transportation planning stages with sketch.

### **ASSIGNMENT: 2. Urban Mass Transportation System**

- 1) What are the factors responsible for travel demand? Explain in detail.
- 2) What are the factors influencing on individual choice of travel mode?
- 3) Explain aggregate and disaggregate approaches of travel demand.
- 4) Compare between BRTS and metro. Find the maximum capacity per hour of BRTS and metro for the frequency of 60 trips per hour on any corridor.
- 5) Write about characteristics, capacity and route planning of Bus Mass Transit System.

### **ASSIGNMENT: 3. Land Use & Transportation Survey**

- 1) What is zoning? Discuss the points to be kept in mind while doing zoning.
- 2) What are methods of origin and destination study? Explain home interview method in detail.
- 3) Describe the various types of transportation surveys to be carried out for planning process.
- 4) Write short note on: Network identification and coding
- 5) Explain various survey data checks.
- 6) Explain procedure to conduct home interview survey with definition of study area and sampling technique.
- 7) Explain the method of public transport survey with types of data collected in the survey.

## **ASSIGNMENT: 4. Travel Demand Modeling**

- 1) Explain the following terms with the help of sketches: Study area, Cordon line, Centroid of zone, Trip, Intrazonal trips, Interzonal trips, Through trips, Screen line, CBD, Desire line, Base year, Horizon year, Land use, Origin, Destination, Travel forecasting
- 2) What is trip generation? Explain in detail the factors governing trip generation and attraction rates.
- 3) Describe in brief trip interchange and trip end model.
- 4) Describe gravity model with formula showing each parameters.
- 5) What is Modal Split? Discuss factors affecting modal split.
- 6) Explain the linear regression methods of trip generation.
- 7) Write a short note on: All-or-nothing assignment method

## **ASSIGNMENT: 5. Mass Transit System**

- 1) What is corridor? Explain by drawing sketch typical corridor components.
- 2) Describe briefly: Corridor identification and corridor screen line analysis.
- 3) What are the urban forms? Describe the characteristics of each related to the transportation planning.
- 4) Explain about point, segment, segment capacity and screen line with neat sketches.