Code No: M0127/R07 **Set No. 1**

IV B.Tech. I Semester Supplementary Examinations, February/March - 2011
TRAFFIC ENGINEERING
(Civil Engineering)

Time: 3 Hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks
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1. a) Describe the various human factors governing road user behavior? [8]
   b) Explain the moving observer method of measurement of running speed and journey speed? [8]

2. a) List out the advantages of manual methods of traffic volume data collection and situations where these methods are to be preferred? [8]
   b) Describe the locations where parking is to be prohibited to ensure safety and convenience? [8]

3. a) List out the operating characteristics of the level of service for the capacity of two - lane rural highways, without access control? [8]
   b) List out the factors affecting the capacity and level of service on roads? [8]

4. a) Discuss the advantages and dis - advantages of on street and off -street parking facilities? [8]
   b) Describe the various traffic regulatory measures with sketches? [8]

5. a) Explain clearly the traffic problems in urban areas in specific durations of peak hour? [8]
   b) Explain the procedure for signal design by Webster's method? [8]

6. a) Describe the various types of pavement markings with neat sketches [8]
   b) Describe the methods to reduce noise pollution due to traffic? [8]

7. a) What are the reasons for cause of a road accident? How is the accident data recorded? [8]
   b) Describe the different measures to reduce accidents with neat sketches? [8]

8. Write short notes on the following [4x4 = 16]
   a) Importance of capacity.
   b) Channelization of Intersections.
   c) Pollutants due to Traffic.
   d) Road safety audit.

Code No: M0127/R07 **Set No. 2**

IV B.Tech. I Semester Supplementary Examinations, February/March - 2011
TRAFFIC ENGINEERING
(Civil Engineering)

Time: 3 Hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks
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1. a) Draw the fundamental diagram of Traffic flow explaining the relationships between the variables? [8]
   b) Briefly describe the various Traffic characteristics that are to be considered in Traffic Engineering? [8]

2. a) How is the Traffic volume study conducted in the field? Finally, how is the traffic volume data presented? [8]
   b) Describe the various statistical methods for analyzing the speed data and how is the spot speed data presented? [8]

3. a) Explain clearly the following parameters – service volume and peak hour factor with reference to level of service concept? [8]
   b) Define capacity of a road and explain the significance of determination of capacity of road? [8]

4. a) Explain with sketches, the common methods of on – street parking? [8]
   b) Explain the method of parking survey by patrolling? [8]

5. a) Describe the procedure for the determination of optimum cycle length and signal settings for an Intersection with time signals? [8]
   b) Discuss the advantages and dis – advantages of the different types of signals? [8]

6. a) Discuss the detrimental effect of traffic on the environment? [8]
   b) What are the various pollutants due to traffic with respect to air pollution? [8]

7. a) What are the various types of road accidents and explain their causes? [8]
   b) Describe and explain with sketches, the various types of traffic signs? [8]

8. Write short notes on the following [4x4 =16]
   a) Analysis of parking data.
   b) Methods of conducting speed studies.
   c) Multi Storey Car Parking facility.
   d) Enforcement measures for accident reduction.

Set No. 3

Code No: M0127/R07

IV B.Tech. I Semester Supplementary Examinations, February/March - 2011
TRAFFIC ENGINEERING
(Civil Engineering)

Time: 3 Hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks
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1. a) Explain the various vehicular characteristics that affect the design and traffic performance? [8]
   b) What are Traffic Census? What are the various traffic surveys carried out to analyze the traffic behavior? [8]

2. a) Explain the procedure for conducting speed and delay studies in the field? [8]
   b) Define passenger car unit? Describe the various factors affecting PCU values? [8]

3. a) Explain the related operating characteristics for freeways with respect to levels of service? [8]
   b) Enumerate the importance of capacity in Highway Transportation Studies? [8]

4. a) Describe the ill – effects of parking? [4]
   b) Describe the various off – street parking facilities with sketches? [12]

5. a) What is the importance of Traffic Signs? List out the general principles of Traffic Signing? [8]
   b) Discuss the advantages and dis – advantages of traffic signals? [8]

6. a) What is Noise Pollution? Describe the measures to reduce noise pollution with respect to vehicular traffic? [8]
   b) Describe with sketches, the various categories of carriage way markings on roadways? [8]

7. a) Describe the steps involved in traffic accident studies? [8]
   b) Explain the different measures for the reduction in accident rates with sketches? [8]

8. Write short notes on the following. [4x4=16]
   a) Channelized Intersections.
   b) Informatory Signs.
   c) Traffic Control Devices.
   d) Physical characteristics of road users.

Set No. 4

Code No: M0127/R07

IV B.Tech. I Semester Supplementary Examinations, February/March - 2011
TRAFFIC ENGINEERING
(Civil Engineering)

Time: 3 Hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks
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1. a) What is the basic object of Traffic Engineering? Describe the various sections into which Traffic Engineering is divided into? [8]
   b) Explain the various factors which affect road user characteristics? [8]

2. a) Define Traffic Volume? Describe the objects and uses of traffic volume studies? [8]
   b) How is the spot speed study conducted in the field and how is the spot speed data finally presented? [8]

3. a) Define the terms Traffic Capacity and practical capacity? Describe the factors affecting practical capacity? [8]
   b) Explain the concept of level of service with the help of a neat sketch? [8]

4. a) Enumerate the various aspects to be investigated during parking studies?
   b) What are traffic regulations? What are the four phases covered by traffic regulations and laws? [8]

5. a)What are Traffic Signs? Describe and enumerate with sketches on the three categories of traffic signs according to Indian motor vehicles Act? [8]
   b) What are Traffic Control Devices? Explain each type with examples? [8]

6. a) Describe about the various types of pollutants that are contributed by traffic to air pollution?
   b) Explain the different measures to reduce air pollution due to traffic? [8+8]

7. a) What are Road Markings? Explain the various types of marking with sketches? [8]
   b) Explain the various Engineering measures to reduce accidents? Also, highlight the various enforcement measures? [8]

8. Write short notes on the following? [4x4 =16]
   a) Parking Survey by patrolling method.
   b) Air pollution due to Traffic.
   c) Object markings.
   d) Causes of Accidents.