Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CE) (2011 Onwards E-I & II) (Sem.–7,8)

TRAFFIC ENGINEERING

Subject Code : BTCE-819

Paper ID : [A2973]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a) What are the pre timed signals?

b) What do you mean by PCU? What is the conversion factor of rickshaw into PCU?

c) What are the three E's in relation with accident studies?

d) Difference between traffic capacity and practical capacity.

e) Draw a fully cloverleaf intersection.

f) Define off street parking.

g) Explain Road Safety Audit.

h) Explain timing diagram.

i) Draw a cross section showing geometric elements for four lane divided carriageway.

j) What do you mean by ITS?

SECTION-B

2. Explain design capacity and level of service.

3. Describe collision diagram in detail.

4. List the common types of pavement markings, what is the significance attached to

   a) A single broken line

   b) A single solid line

   c) A combination of broken and solid lines.

5. Estimate the theoretical capacity of a traffic lane with one way traffic flow at a stream speed of 50 kmph. Assume the average space gap between vehicles to follow the relation s_g= 0.278 Vt. Take t= 0.7 secs and average length of vehicles = 6m.

6. What do you understand from the traffic system management?

SECTION-C

7. Describe the relationship between :

   a) Travel time and speed

   b) Speed and density

   c) Speed and volume

   d) Volume and density

   e) Volume, speed and density

8. Explain in detail various types of road markings.

9. Explain ITS and how GPS can be used for controlling traffic jams.