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BICEE-023

B.TECH. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

December, 2013

BICEE-023 : TRAFFIC ENGINEERING

Time : 3 hours *Maximum Marks : 70*

*Note : Attempt **any five** questions. All questions carry **equal** marks. Scientific calculator is **permitted**. Assume missing data if any.*

1. (a) What are the objects and scope of traffic engineering ? Explain briefly. 7
   (b) What are different vehicular characteristics which affect the road design? Briefly explain. 7

2. Explain the term traffic volume. What are the objects of carrying out traffic volume studies ? Indicate how the traffic volume data are presented and the results used in traffic engineering ? 14

3. (a) Define practical capacity. Discuss the factors, affecting the practical capacity of road in detail. 10
   (b) Write the factors affecting PCU values. 4

4. (a) Discuss the various aspects to be investigated during parking studies. 4
   (b) Explain the various measures to prevent accidents in detail. 10

5. (a) Write the advantages and disadvantages of Grade Separation. 7

(b) Draw the neat sketch for diamond and partial clover leaf types interchanges. 3.5x2=7

6. (a) Compare between the angle parking and parallel parking. 4

(b) Calculate the spacing between the lighting units to produce a lux equal to 7.0 from the following data: 10

Width of road = 15m
Mounting ht = 7.5m
Lamp size = 7000 lumen
Luminaire type II
Coefficient of utilization for ratio value 2 is 0.44.
Maintenance factor = 0.8.

7. (a) Compare between the channelized and unchannelized intersections with suitable neat sketches. 10

(b) A vehicle travelling at 40 kmph was stopped within 1.8 seconds after the application of the brakes. Determine the average skid resistance. 4

8. Write short notes on **any four** of the following : 3.5x4=14

(a) Regulatory signs
(b) Traffic rotary
(c) Origin and destination study
(d) Spot speed study
(e) Forms of intersections
(f) Objectives of accident studies