B.Tech. (Civil Engg.)
BTCLEVI
Term-End Examination
June, 2014

BICE-020 : TRANSPORTATION ENGG. II

Time : 3 Hours   Maximum Marks : 70

Note : Attempt *any seven* questions. *All questions carry equal marks.*

1. What is Indian Road Congress ? What are its functions ?   **4+6=10**

2. Classify and explain the different categories of roads according to :   **10**
    (a) location
    (b) importance, and
    (c) traffic

3. (a) Explain the purpose of road super elevation.
    (b) Estimate the super elevation required at horizontal curve of radius 250 m for a design speed of 80 km/hr. Assume coefficient of lateral friction as 0.15.   **3+7=10**

4. (a) Define the Overtaking Sight Distance (OSD).   **2+8=10**
    (b) Calculate the safe OSD for a design speed of 85 kmph. Assume all other data suitably.

5. (a) Why joints are necessary in cement concrete
        pavements ?   3+7=10
    (b) List the various types of joints with sketches.

6. (a) Discuss the surveys to be conducted for   5
        Highway construction with respect to
        environment.
    (b) With a neat cross-sectional sketch, explain   5
        the laying of WBM roads.

7. (a) What are traffic signs ? Give examples with   5
        sketches.
    (b) Explain how GIS helps in controlling traffic.   5

8. (a) Define traffic volume.   2+8=10
    (b) Explain the objectives and various methods
        for carrying out traffic volume studies.

9. Write short notes on :   5+5=10
    (a) Intelligent transport system
    (b) Vehicle operating costs and accident costs

10. Discuss in brief the factors to be considered for
    studying traffic capacity. Also explain traffic
    restraints.   7+3=10

―――――