

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CE) (2011 Onwards) (Sem.-5)
TRANSPORTATION ENGINEERING-I
Subject Code : BTCE-504
Paper ID : [A2081]

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 have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.
4. Assume any missing data.

SECTION-A**1. Answer briefly :**

- a) What are the different modes of transportation?
- b) Classify the Urban roads as per 3rd 20 year Road Development Plan.
- c) Draw a typical cross-section of a two lane National Highway.
- d) Define WBM.
- e) What would be the average height of the driver's eye from the road level?
- f) Differentiate between Width of Roadway and Width of Carriage way.
- g) How the noise pollution can be controlled over the roads?
- h) What do you mean by spot speed?
- i) How the obstruction approach marking is shown on the road?
- j) Explain the necessity and objects of highway planning?

SECTION-B

2. Give a logical reason to say No to Drink and Drive.
3. What do you mean by Overturning effect of vehicles on road?
4. How could Sub Surface Drainage be possible at roads?
5. Explain the various types of Sight Distance.
6. Enumerate the use of ITS.

SECTION-C

7. Discuss the objects of the following types of joints; draw a neat sketch.
 - a) Expansion joints
 - b) Contraction joints
 - c) Warping joints
 - d) Construction joints
 - e) Longitudinal joints
8. What are the various tests to be carried out on various materials of a rigid pavement (excluding Sub grade)?
9. At right angled intersection of 2 roads, road 1 has 4 lanes, with total width 12m. Road 2 has 2 lanes with width 6.6m. volume of traffic approaching intersection during design hour are 900 and 743 PCU/hour on the two approaches of road 1 and 278 & 180 PCU/hour on the two approaches of road 2. Design the signal timings.