

CE - 7102**B.E. VII Semester**

Examination, December 2015

Traffic Engineering*Time : Three Hours**Maximum Marks : 70*

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
 ii) All parts of each question are to be attempted at one place.
 iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
 iv) Except numericals, Derivation, Design and Drawing etc.

UNIT - I

1. a) What are the objects of traffic engineering? Explain briefly.
- b) What are the factors which affects road user characteristics? Explain.
- c) Explain the PIEV theory.
- d) What are different vehicular characteristics which affect the road design? Explain in detail.

OR

Enumerate the drivers characteristics you would study for a high speed road. What is meant by visual acuity and field of vision?

UNIT - II

2. a) What is meant by traffic surveys and how are these useful to a highway engineer?
- b) What is meant by 30th highest hourly traffic volume explain briefly?
- c) Explain spot speed, running speed and average speed.

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- d) Explain briefly the various aspects investigated during parking studies. What are the uses of these studies?

OR

Explain traffic capacity, basic capacity, possible capacity and practical capacity. Discuss briefly the various factors affecting the practical capacity.

UNIT - III

3. a) Name the different types of road sign and draw a dimensional sketch of any one road sign.
- b) What is pedestrian signals where it is used?
- c) Explain traffic rotary. What are its advantages?
- d) Explain the difference between fixed time signal and traffic actuated signals.

OR

Explain the steps involved in design of isolated fixed time traffic light signal as per IRC guideline.

UNIT - IV

4. a) What are the objects of highway lighting?
- b) What are factors that influence night visibility?
- c) Explain various design factors in road lighting.
- d) Discuss in detail the different methods of light distribution in street lighting.

OR

Write short notes on

- i) Cut off system
- ii) Height and overhang of mounting

UNIT - V

5. a) What are the objectives of accident studies?
- b) Define express ways and its importance.
- c) Write short note on condition diagram and collision diagram.
- d) What are the three E's for prevention of road accidents explain in detail.

OR

Write in detail about transit system operation for mass transportation.