

[01-4106]

IV/IV B.E. DEGREE EXAMINATION.

First Semester

Civil Engineering

TRANSPORTATION ENGINEERING – I

(Common with Civil Environmental Engineering)

(Effective from the admitted batch of 2006-2007)

Time : Three hours

Maximum : 70 marks

Question No. 1 is compulsory.

Answer any FOUR from the remaining.

Answer all bits of a question at one place

All questions carry equal marks.

1. (a) Explain the term CRF.
- (b) What is Master Plan?
- (c) Enumerate PCU.
- (d) Write about Pavement unevenness.
- (e) What is meant by seal coat?
- (f) Write about zoning laws.
- (g) Describe Apron Marking.

2. (a) What are the various surveys to be carried out before planning a highway system for a given area? Explain briefly.
- (b) Explain total reaction time of driver and the factors on which it depends. Explain PIEV theory.
3. (a) Explain origin and destination study. What are the various uses of O&D studies?
- (b) Explain traffic capacity, basic capacity, possible capacity and practical capacity.
4. (a) Explain the California resistance value method of flexible pavement design.
- (b) Briefly design a flexible pavement, given 'R' value of sub grade soil = 28, 'Traffic Index' = 9, C - value of WBM base course = 25 and C - value of 7.5 cm thick bituminous surfacing is 60.
5. (a) What are the advantages and drawbacks of cement concrete roads?
- (b) Write an explanatory note on cross drainage and drainage structures.
6. (a) Explain the network of air traffic control.
- (b) Summarize briefly the various runway geometrics as recommended by ICAO.

7. What are the imaginary surfaces? What is their significance? Explain with the aid of neat sketches the shape of each surface for different types of airports.
8. Write short notes on the following questions:
- (a) Preliminary surveys
 - (b) Unchannelized intersection
 - (c) Cone of silence
 - (d) Frictional stresses