

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC - SEMESTER-V • EXAMINATION – WINTER 2013

Subject Code: X50601

Date: 04-12-2013

Subject Name: Highway Engineering

Time: 10.30 am - 01.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q-1 (a) What are the objectives of highway planning? Give classification of highways according to Nagpur road plan. 07
- (b) Explain (i) Central Road Fund (ii) Indian Road Congress 07
- Q-2 (a) State the objects of widening of pavement on horizontal curves. What are the factors on which the design of widening depends? Explain. 07
- (b) Draw the neat sketch of cross section of National highway in embankment mention dimensions also. 07
- OR**
- (b) Calculate the length of stopping sight distance for two way traffic in a single lane road the design speed is 75kmph, reaction time of driver is 2 sec. coefficient of friction is 0.5 alignment is in ascending 1.5% and also descending 2.5% 07
- Q-3 (a) Write a short note on “Los Angeles Abrasion test” 07
- (b) Give the index properties of soil. 07
- OR**
- Q-3 (a) Explain the maintenance of bituminous road. 07
- (b) Explain by drawing sketch rigid and flexible pavements. 07
- Q-4 (a) What is the necessity of highway drainage system? Draw the sketch of surface drainage system of urban roads. 07
- (b) Draw the sketch of hill road components. 07
- OR**
- Q-4 (a) State the advantages of street lighting. 07
- (b) What are the desirable characteristics of road side tree plantations 07
- Q-5 (a) What is the necessity of parking space in urban area? Draw the sketch of angular parking 07
- (b) Define traffic volume count. Describe procedure of traffic volume count. 07
- OR**
- Q-5 (a) What are the causes of road accidents? Explain. 07
- (b) Describe in detail road user characteristics 07
