Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY PDDC - SEMESTER-V EXAMINATION - WINTER 2015

Subject Code:X50601 Date:10/12//2015

Subject Name: Highway Engineering

Time: 10:30pm to 1:00pm 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)	Write notes on: (a) Jaykar Committee, (b) Central Road fund	07
	(b)	Write necessity of highway planning	07
Q.2	(a)	Describe in detail classification of roads.	07
	(b)	Write notes on: (a) IRC, (b) CRRI	07
		OR	
	(b)	Explain Nagpur Road plan.	07
Q.3	(a)	Explain highway alignment with requirements.	07
	(b)	Explain Reconnaissance and Preliminary Survey for location of road projects.	07
		OR	
Q.3	(a)	Explain in details about cambers.	07
	(b)	Explain Kerbs. Draw cross section details in embankment and in cutting.	07
Q.4	(a)	Explain PIEV theory for total reaction time.	07
	(b)	Calculate Stopping sight distance on a highway at a descending gradient of 2 % for a design speed of 85 kmph. Assume other data suitably as per IRC recommendation.	07
		OR	
Q.4	(a)	Define super elevation. Derive the formula for super elevation.	07
	(b)	Design the rate of super elevation for a horizontal highway curve for radius 490 m and speed 100 kmph.	07
Q.5	(a)	Describe road side development & arboriculture.	07
	(b)	What are the objectives of accident studies? Explain various causes of accidents.	07
		OR	
Q.5	(a)	Explain parking studies with various aspects.	07
	(b)	Describe significance and requirements of highway drainage.	07
