Seat No.:	Enrolment No
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## GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER-V • EXAMINATION – SUMMER • 2014

Subject Code: X50601 Date: 27-05-2014

**Subject Name: Highway Engineering** 

Time: 02:30 pm - 05:00 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)	Explain the classification of roads as per 1st Twenty Year Road Plan.	<b>07</b>
	<b>(b)</b>	Explain (i) Central Road Fund (ii) Indian Road Congress (iii) Indian Motor Vehicle act.	<b>07</b>
Q-2	(a)	Explain camber. What are the objects of camber? Discuss the factors on which the amount of camber depends.	07
	<b>(b)</b>	Explain the factors which control the highway alignments.	07
		OR	
(	<b>(b)</b>	State the objects of widening of pavement on horizontal curves. What are the factors on which the design of widening depends? Explain.	07
Q-3	(a)	Explain the maintenance of bituminous road.	07
	(b)	Write a short note on "Penetration Test".	07
	( )	OR	
Q-3	(a)	Give the index properties of soil.	07
	( <b>b</b> )	Describe the test procedure of "Aggregate impact test".	07
Q-4	(a)	Explain various types of intersection at grade with sketch.	<b>07</b>
	<b>(b)</b>	What is the necessity of parking space in urban area? Draw the sketch of angular parking	07
		OR	
Q-4	(a)	What are the advantages and limitations of traffic rotary?	07
	(b)	What are the applications of origin and destination studies?	07
Q-5	(a)	What are the desirable characteristics of road side tree plantations?	07
	<b>(b)</b>	Explain surface drainage and sub-surface drainage.	<b>07</b>
		OR	
Q-5	(a)	Explain the significance of PPP models.	07
	<b>(b)</b>	What are the road pavements? Draw the sketch of rigid and flexible pavements.	<b>07</b>

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