Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – WINTER 2012

Subject code: 1721301 Date: 29-12-2012

Subject Name: Traffic Engineering - II

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)**	Define the terms :- (i) Traffic flow (ii) Traffic volume (iii) Time headway (iv) Space headway (v) Time mean speed (vi) Jam density (vii) Concentration	**07**
	(b)	Describe in detail traffic management measures	**07**
Q.2	**(a)**	Explain by drawing sketch forms of weaving movements	**07**
	(b)	Explain Basic capacity, possible capacity and practical capacity in context with highway capacity studies	**07**
		OR	
	(b)	Explain drawing curve traffic flow at bottle neck and shock wave formation	**07**
Q.3	**(a)**	Describe in detail hierarchy of level of service	**07**
	(b)	Draw the sketch of cross road and show the number of conflict points Due to straight and weaving movements	**07**
		OR	
Q.3	**(a)**	Describe in detail the impact due to road transport on atmosphere like air and noise pollution	**07**
	(b)	Explain Norman method of determining signalized intersection	**07**
Q.4	**(a)**	Draw any three sketch of traffic signs with description	**07**
	(b)	A fixed time two phase signal to be provided at intersection having North ,South, East and West where straight ahead traffic is permitted The design hour flow and saturation flow are given in following table North South East West Design hour flow (pcu) 790 410 755 1010 Saturation flow (pcu) 2410 1990 2990 3010 Calculate optimum cycle time, green time for minimum overall delay the time lost due to starting delays is assumed 2 seconds the value of amber time is 2 seconds sketch timing diagram also.	**7**
		OR	
Q.4	**(a)**	Explain fixed time signal and vehicle actuated signal	**07**
	(b)	Draw the sketch of bus bay abutting foot path	**07**
Q.5	**(a)**	What is necessity of road pricing ? How road pricing is achieved?	**07**
	(b)	Describe stepwise procedure of traffic simulation	**07**
		OR	
Q.5	**(a)**	Explain traffic restraint and parking control restraint	**07**
	(b)	What are the principles of parking design?	**07**

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