Seat No.:	Enrolment No.
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Subject code: 711903N

## GUJARAT TECHNOLOGICAL UNIVERSITY

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

Date: 12-01-2013

Time	e: 02	Name: Highway Materials & Testing 2.30 pm – 05.00 pm Total Marks ions:	: 70
	2.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.	
Q.1	(a)	Define the following: Mat asphalt, cape seal, sheet asphalt, stone mastic asphalt, performance graded, ambient grinding and cellular concrete.	07
	<b>(b)</b>		07
Q.2	(a)	Explain briefly emulsion polymerization. State the merits and demerits of it.	07
	<b>(b)</b>	State the basic objective, principle and procedure of determining specific gravity of bitumen.  OR	07
	<b>(b)</b>	_	07
Q.3	(a)	Write a short note on stress absorbing membrane using modified binder.	07
	(b)	State the test procedure of estimation of deleterious material.  OR	07
Q.3	(a)	What are the causes of stripping of bitumen and state the grades of antistripping agent (Derbo range) for hot mix and for repairs.	07
	<b>(b)</b>		07
Q.4	(a)	What is SFRC mix? State the range of parameters for SFRC mixes encountered in practice.	07
	(b)	Write a shot note on dry lean concrete.  OR	07
Q.4	(a) (b)		07 07
Q.5	(a) (b)	Explain the procedure used in the design of a concrete mix using road note no. 4 methods.	07 07
Q.5	(a)	OR State to explain the graphical methods for proportioning, blending or	07
	(b)	combining various aggregates.  Explain briefly desirable properties of bituminous mix design.	07

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