Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

## B. E. - SEMESTER - VII • EXAMINATION - WINTER 2012

-		code: 170205 Date: 28/12/2012	
•		Name: Alternative Fuels and Engines (DE-I)	
Instr		30 am - 01.00 pm Total Marks: 70	
111501	1. 2.	Attempt any five questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.	
Q.1	(a)	Define following terms: (i) Pour point (ii) Flash Point (iii) Viscosity (iv) Octane No. (iv) Cetane No.	05
	(b) (c)		05 04
Q.2	(a)	Describe the harmful effects of pollutants from exhaust gases of auto vehicle on atmosphere and human being.	07
	<b>(b)</b>		07
		OR	
	<b>(b)</b>	What is carbon foot print? List the component of it.  Describe the procedure for Carbon credit calculation briefly.	07
Q.3	(a)	Explain the process of making biodiesel from vegetable oil.	07
	<b>(b)</b>	What is emulsification of alcohol with diesel? Describe emission improvement by blending of alcohol with diesel.  OR	07
Q.3	(a) (b)	What are the effects on properties of diesel by blending it with biodiesel?	07 07
Q.4	(a) (b)	• •	07 07
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Q.4	(a) (b)	Explain storage and transportation of hydrogen.  Draw schematic layout of solar powered auto vehicle and give its advantages.	07 07
Q.5	(a) (b)		07 07
Q.5	(a) (b)	Explain working of one of rotary engine with diagram.	07 07

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