Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII EXAMINATION - WINTER 2015

Su	bject	Code: 170205	Date: 04/12/2015	
Su	bject	Name: Alternative Fuels and Engines		
Tiı	me: 1	0:30am to 1:00pm	Total Marks: 70	
Inst	tructio			
	2.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.		
<b>Q.1</b>	(a)	Describe the harmful effects of each pollutants from evehicle on atmosphere and human being in details.	exhaust gases of auto	07
	<b>(b)</b>	What is the need of alternative fuels? Discuss the barralternative fuels in India.	riers in implementing	07
Q.2	(a) (b)	Write a short note on green house effect. What is emulsification of alcohol with diesel? Describely blending of alcohol with diesel.	be emission improvement	07 07
		OR		
	<b>(b)</b>	Enlist factors affecting biogas formation.		07
Q.3	(a)	Discuss advantages, disadvantages & properties of hy applications.	drogen fuel with its	07
	<b>(b)</b>	Describe the process for production of biodiesel from <b>OR</b>	n Jatropha seeds.	07
Q.3	(a)	Write a short note on fuel cell with neat sketch.		07
	<b>(b)</b>	Compare LPG, CNG and gasoline fuel on basis of cos	st and safety.	07
Q.4	(a)	(a) Explain solar powered vehicle with neat sketch.		07
	<b>(b)</b>	Explain important components of hybrid vehicle.		07
		OR		
Q.4	(a)	Discuss Performance and emission characteristics of a IC engine.	any one vegetable oil on	07
	<b>(b)</b>	Explain construction and working of Wankel engine v	with neat sketch.	07
Q.5	(a) (b)	Write a short note on Eco Friendly Plastic Fuels.  Discuss about carbon foot print and Carbon credit cal-	culation	07 07
	(U)	213Cu33 about Carbon 100t print and Carbon credit car	CuiuuUII.	U/
		OR		
Q.5	(a)	Write merits and demerits of alcohol as a fuel for IC e	engine.	07
	<b>(b)</b>	Draw layout of hydrogen car and explain it.		07
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