Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION – SUMMER • 2014

Subject Code: 170205		Code: 170205 Date: 31-05-201	Date: 31-05-2014	
Tir	ne: 0 ructio 1. 2.	Name: Alternative Fuels and Engines 2:30 pm - 05:00 pm Total Marks: 7 ons: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	70	
Q.1	(a) (b)	Discuss Free piston Engine. Explain advantages and limitation of electric vehicles.	07 07	
Q.2	(a) (b)	Discuss uses of Bio diesel in IC engine. Compare various parameters of three different Alternative fuel. OR	07 07	
	(b)	Explain layout of solar powered automobiles.	07	
Q.3	(a) (b)	Enlist factors affecting biogas formation. Write short note on Esterification.	07 07	
Q.3	(a) (b)	OR Compare LPG, CNG and gasoline fuel on cost and safety. Discuss advantages and disadvantage of Liquid Hydrogen as fuel for IC engine.	07 07	
Q.4	(a) (b)	Discuss about Carbon foot print and Carbon credit calculation. Explain various properties of methanol and ethanol as engine fuel. OR	07 07	
Q.4	(a) (b)	With neat sketch discuss construction and working of electric vehicle. Write short note on variable compression engine.	07 07	
Q.5	(a)	Is it possible to use Di- Methyl Ether (DME) as alternative fuel in I.C. engine? Explain in detail.	07	
	(b)	Explain effects of various constitutes of Exhaust gas emission on Environment and human health.	07	
		OR	_	
Q.5	(a) (b)	Explain process of separation of Bio-diesel. Discuss about Fuel cell vehicle with sketch.	07 07	
