Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject code: 711108N Subject Name: Combustion Engineering Time: 02.30 pm – 05.00 pm Total Mark Instructions:			Date: 16-01-2013	
		s: 70		
	2. 1	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a) (b)	Explain general conditions necessary for combustion. Explain stages of Combustion on $P-\theta$ diagram for S.I. engine.	07 07	
Q.2	(a) (b)	Discuss factors affecting delay period in S. I. Engine. Explain abnormal combustion in Spark Ignited Engine. OR	07 07	
	(b)	Compare Detonation in S.I. Engine and knocking in C.I. engine.	07	
Q.3	(a) (b)	Discuss factors affecting combustion chamber design. State various methods to provide air motion inside cylinder. OR	07 07	
Q.3	(a) (b)	Explain Chain reactions. Give classification of liquid fuels for I.C. engines.	07 07	
Q.4	(a) (b)	"Best Diesel Fuel is most Poor Petrol Fuel" Explain. Discuss pollution of environment due to Diesel Engine operation. OR	07 07	
Q.4	(a) (b)	Explain Adiabatic Flame Temperature. Classify atomizer on the basis of various parameters.	07 07	
Q.5	(a) (b)	Define flame front and explain propagation of flame front. Explain, how to minimize or control knocking. OR	07 07	
Q.5	(a) (b)	Compare combustion phenomenon for solid, liquid and gaseous fuel. Explain stochiometric Air-Fuel ratio, state the effect of Excess air on combustion.	07 07	
