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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

## ME - SEMESTER- I. EXAMINATION - WINTER 2014

Subject Code: 2711108  Subject Name: Combustion Engineering  Time:02:30 p.m. to 05:00 p.m.  Instructions:  Date:12/01/  Total Marks: 70		/ 2015	
		Attempt all questions.  Make suitable assumptions wherever necessary.	
Q.1	(a) (b)	Define Combustion and Explain briefly combustion phenomenon in SI Engine. Explain with diagram difference between normal combustion and detonation.	07 07
Q.2	(a) (b)	Explain stages of combustion in CI Engine with P- diagram.  Define delay period. What are the different factors affect delay period.  OR	07 07
	(b)	Define combustion reaction and 1 <sup>st</sup> law of thermodynamics as applied to combustion reaction.	07
Q.3	(a) (b)	Explain basic requirement of a good combustion chamber.  Write short on pre- ignition with neat sketch.  OR	07 07
Q.3	(a) (b)	õSI engine are generally not superchargedö- Justified the statement. Explain chain reaction and opposing reaction.	07 07
Q.4	(a) (b)	F- Head combustion chamber- Explain with neat sketch.  Explain M- combustion chamber for with neat sketch.  OR	07 07
Q.4	(a) (b)	Define spray formation and its different characteristic. Explain with diagram the different types of liquid fuel atomizer.	07 07
Q.5	(a) (b)	Explain fluidized bed combustion with neat sketch.  Explain Cyclone burner combustion with neat sketch.  OR	07 07
Q.5	(a) (b)	Write short on combustion generated pollutant.  Explain point to be considering while designing the coal burner.	07 07

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