GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER-I(New course) • EXAMINATION - WINTER- 2015

Sub	ject	Code: 2711108 Date: 04/01/202	Date: 04/01/2016	
Subject Name: Combustion Engineering Time: 2:30 pm to 5:00 pm Instructions: Total Mark			s: 70	
11150	1.	Attempt all questions. Make suitable assumptions wherever necessary.		
Q.1	(a)	Define Combustion. With the help of P- Θ diagram explain the stages of combustion in SI engine.	07	
	(b)	Explain knocking and Pre – Ignition with diagram in SI engine.	07	
Q.2	(a)	Explain stages of Combustion in CI engine with P- Θ diagram.	07	
	(b)	Explain the factors on which delay period depends in CI engine. OR	07	
	(b)	Define combustion reaction and 1 st law of thermodynamics as applied to combustion reaction.	07	
Q.3	(a)	Explain following terms. 1. Adiabatic flame temperature 2. Enthalpy of formation.	07	
	(b)	Write short note on different types of flames. OR	07	
Q.3	(a) (b)	Define Ignition lag in SI engine and factors affecting Ignition lag in SI engine. Explain the need of swirl in CI engine combustion and different method of air swirl.	07 07	
Q.4	(a) (b)	Explain working of fluidized bed combustion with neat sketch. List different types of pulverized Coal burners. Explain Cyclone burner combustion with neat sketch.	07 07	
0.4	()	OR	0.5	
Q.4	(a) (b)	Define 1. Wild ping 2. Rumble. Classify Atomizer on the basis of various parameters.	07 07	
Q.5	(a) (b)	Divided combustion chamber-Explain with neat sketch. Write short note on MAN Combustion chamber for with neat sketch. OR	07 07	
Q.5	(a) (b)	Discuss pollution of environment due to Diesel Engine operation. "SI engine are generally not supercharged"- Justified the statement.	07 07	
