nrolment No.
]

GUJARAT TECHNOLOGICAL UNIVERSITY ME SEMESTER – I (NEW) EXAMINATION – SUMMER 2017

Subject Code: 2711108 Date:11/05/2017

Subject Name: Combustion Engineering

Time:02:30 P.M. to 05:00 P.M. Total Marks: 70

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

Q.1	(a)	Define combustion. With the help of P-O diagram explain the stages of	07
	(b)	combustion in CI engine. Define ignition delay period. Explain factors affecting delay period.	07
Q.2	(a) (b)	Briefly explain the combustion phenomena in SI engine Explain the factors on affect knocking in SI engine. OR	07 07
	(b)	Define combustion reaction and 1 st law of thermodynamics as applied to combustion reaction.	07
Q.3	(a) (b)	Write down points to kept in mind to design combustion chamber of IC engine. Write short on Pre- ignition, normal combustion, knocking with neat sketch. OR	07 07
Q.3	(a) (b)	Explain different methods of air swirl CI engine combustion. Explain chain reaction and opposing reaction.	07 07
Q.4	(a) (b)	Explain fluidized bed combustion with neat sketch. Explain Cyclone burner combustion with neat sketch. OR	07 07
Q.4	(a) (b)	Define viscosity, flash point and pour point for fuel. Classify liquid fuel atomizer on the basis of various parameters.	07 07
Q.5	(a) (b)	Divided combustion Chamber-Explain with neat sketch. Explain M- combustion chamber for with neat sketch. OR	07 07
Q.5	(a) (b)	Air pollution due effect to environment due to IC Engine operation. Explain point to be considering while designing the coal burner.	07 07
