

GUJARAT TECHNOLOGICAL UNIVERSITY
ME - SEMESTER- I • EXAMINATION – WINTER 2014

Subject Code: 2711108**Date: 12/01/ 2015****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 and Explain briefly combustion phenomenon in SI Engine. **07**
(b) Explain with diagram difference between normal combustion and detonation. **07**
- Q.2** (a) Explain stages of combustion in CI Engine with P- diagram. **07**
(b) Define delay period. What are the different factors affect delay period. **07**
- OR**
- (b) Define combustion reaction and 1st law of thermodynamics as applied to combustion reaction. **07**
- Q.3** (a) Explain basic requirement of a good combustion chamber. **07**
(b) Write short on pre- ignition with neat sketch. **07**
- OR**
- Q.3** (a) SI engine are generally not supercharged- Justified the statement. **07**
(b) Explain chain reaction and opposing reaction. **07**
- Q.4** (a) F- Head combustion chamber- Explain with neat sketch. **07**
(b) Explain M- combustion chamber for with neat sketch. **07**
- OR**
- Q.4** (a) Define spray formation and its different characteristic. **07**
(b) Explain with diagram the different types of liquid fuel atomizer. **07**
- Q.5** (a) Explain fluidized bed combustion with neat sketch. **07**
(b) Explain Cyclone burner combustion with neat sketch. **07**
- OR**
- Q.5** (a) Write short on combustion generated pollutant. **07**
(b) Explain point to be considering while designing the coal burner. **07**
