

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER– V • EXAMINATION – WINTER 2016

Subject Code: 150201**Date: 17/11/2016****Subject Name: AUTOMOBILE ENGINES****Time: 10:30AM – 01:00PM****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) What is carburetor? Explain the working of single jet carburetor with neat sketch. **07**
 (b) Explain the Splash lubrication system used in automobile engines with neat sketch. **07**
- Q.2** (a) List various diesel injection systems used in C.I. engine. Also explain Common Rail Diesel Injection system with neat sketch. **07**
 (b) Derive an equation for A: F ratio of a single jet carburetor without compressibility of air. **07**
- OR**
- (b) Differentiate between LPG and CNG as fuel for I.C. engine. **07**
- Q.3** (a) Explain the effects of Pollutants on environment from gasoline engines and its controls. **07**
 (b) Define Scavenging & Enlist types of engine scavenging and explain any one of them. **07**
- OR**
- Q.3** (a) What is pre- ignition? Compare Knocking in S.I. and C.I. engine. **07**
 (b) Differentiate between supercharging and turbo-charging of an IC engine. **07**
- Q.4** (a) Explain Thermostatic Regulator forced cooling system with neat sketch. **07**
 (b) Explain various modern methods and gas chromatography to control air-pollution. **07**
- OR**
- Q.4** (a) Explain the MPFI system used in S.I. engines with neat sketch. **07**
 (b) Classify injection pump governors and explain pneumatic governor with neat sketch. **07**
- Q.5** (a) Write a short note: Orsat apparatus. **07**
 (b) List the various methods used to measure the B.P of the engine. Also explain the rope brake dynamometer with neat sketch. **07**
- OR**
- Q.5** (a) Explain the stages of combustion with P- θ diagram in C.I. engines . **07**
 (b) Classify the combustion chambers of C.I. engines. Explain with neat sketch the working of “M” combustion chamber. **07**
