

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 150201****Date: 16-01-2013****Subject Name: Automobile Engines****Time: 02:30 pm to 05:00 pm****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) Explain working of four stroke petrol engine with neat sketch. 07
(b) Explain function of crank pin, connecting rod, piston ring. 07
- Q.2** (a) Enlist types of engine scavenging and explain any one of them. 07
(b) Explain stratified charge engine with neat sketch. 07
OR
(b) Explain Wankel engine with neat sketch. 07
- Q.3** (a) Explain common rail diesel injection system (CRDI) with neat sketch. 07
(b) Explain merits and demerits of hydrogen as engine fuels. 07
OR
- Q.3** (a) Explain air cooling system for engines. 07
(b) Write short note on antifreeze solutions. 07
- Q.4** (a) Explain types and functions of engine lubrication. 07
(b) Enlist types of carburetors and explain any one of them with neat sketch. 07
OR
- Q.4** (a) Explain objectives of engine superchargers. 07
Q.4 (b) Explain the stages of combustion with P- Θ diagram in C.I.Engines. 07
- Q.5** (a) Compare LPG and CNG as fuel for I.C.Engines. 07
(b) Explain the effects of pollutants on environment from gasoline engines and its control. 07
OR
- Q.5** (a) Enlist the methods for measurement of brake power of an engine and explain any one of them. 07
(b) Explain valve timing diagram for four stroke diesel engine. 07
