

GUJARAT TECHNOLOGICAL UNIVERSITY
ME - SEMESTER– III • EXAMINATION – SUMMER 2015

Subject Code: 732101**Date: 02/05/2015****Subject Name: Advance Internal combustion Engine****Time: 2:30 pm to 5:00 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 MPFI system and their advantages in I C engine. **07**

(b) Discuss I C engine emission effects on human health. **07**

Q.2 (a) Explain catalytic converters and its use in auto vehicles. **07**

(b) Write short note on PUC certificate and need of pollution law. **07**

(OR)

(b) What are the diffident materials use in following components of I. C. engine.? **07**
& why? :1. Engine head, 2. Engine piston, 3. Piston ring, 4. Engine Valve, 5. Engine liner.

Q.3 (a) Explain spark ignition engine combustion process in I.C. engine. **07**

(b) Distinguish CNG and LPG fuel of internal combustion engine. **07**

(OR)

Q.3 (a) Explain compression ignition engine combustion stages in I.C. engine. **07**

(b) What are the different alternate fuel advisable for use in vehicle? **07**

Q.4 (a) Explain flow through valves and exhaust manifold system. **07**

(b) How noise pollution control in auto vehicles? Discuss effect of noise pollution on human body. **07**

(OR)

Q.4 (a) Write short note on supercharger and turbocharger engine. **07**

(b) What is the future of battery operated vehicle ? **07**

Q.5 (a) Write short note on future fuels of hydrogen. **07**

(b) Explain magneto electronic ignition system use in automotive vehicle. **07**

(OR)

Q.5 (a) Define volumetric efficiency and its effect on performance of engine at different load conditions. **07**

(b) Explain normal and abnormal combustion and its effects on auto vehicle. **07**
