

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – III • EXAMINATION – SUMMER • 2013

Subject code: 732101

Date: 15-05-2013

Subject Name: Advanced Internal Combustion Engine

Time: 10.30 am – 01.00 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 theoretical and actual PV diagram of diesel cycle. | 07 |
| | (b) | Explain “Ratings of CI and SI engine fuel”. | 07 |
| Q.2 | (a) | Comparison between Battery ignition system & magneto ignition system. | 07 |
| | (b) | What is present state of alcohol for use as an alternative fuel? | 07 |
| | | OR | |
| | (b) | Compare properties of diesel fuel and vegetable oil. | 07 |
| Q.3 | (a) | Explain Stages of combustion in SI engine. | 07 |
| | (b) | Explain Direct Injection Chambers. | 07 |
| | | OR | |
| Q.3 | (a) | Explain Types of combustion chamber in CI engine. | 07 |
| | (b) | What are the Factors affecting knocking in CI engine? | 07 |
| Q.4 | (a) | Explain crankcase scavenged two stroke engines with neat sketch. | 07 |
| | (b) | Different between power & specific output. | 07 |
| | | OR | |
| Q.4 | (a) | Explain factor affecting Performance Characteristics of I C Engine. | 07 |
| | (b) | Explain MPFI system. | 07 |
| Q.5 | (a) | Explain EGR system. | 07 |
| | (b) | Effect of engine emission on human health. | 07 |
| | | OR | |
| Q.5 | (a) | Explain catalytic convertor. | 07 |
| | (b) | Explain sources of emission in CI and SI engine. | 07 |
