

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-Vth Examination December 2010

Subject code: 150201

Subject Name: AUTOMOBILE ENGINES

Date: 18 /12 /2010

Time: 03.00 pm - 05.30 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) Classify Automobile Engines. Mention some applications of engines. **04**
(b) Explain the working principle of four-stroke C I engine with neat sketch. **05**
(c) Explain the important basic components of an I C engines? **05**
- Q.2** (a) Explain the working principle of wankel engine. **07**
(b) Define Octane number. Discuss the important properties of S I engine fuel. **07**
- OR**
- (b) Explain the working principle of a simple carburetor with a neat sketch. **07**
- Q.3** (a) What is MPFI system? Explain any one type with neat sketch. **07**
(b) Explain the C I engine fuel feed system with a neat sketch. **07**
- OR**
- Q.3** (a) What is Knocking? Compare the SI and CI engine knocking. **07**
(b) Explain the stages of combustion in C I engine. **07**
- Q.4** (a) Describe the forced cooling system with neat sketch. **07**
(b) What are the functions of a lubrication system? Explain the dry sump lubrication system with neat sketch. **07**
- OR**
- Q.4** (a) (1) Describe the function of a Thermostat? **03**
(2) Why anti freeze solution is used in cooling system? **04**
(b) What are the desired properties of a lubricant? Name the additives which are added to the lubricant. **07**
- Q.5** (a) What is supercharging? Explain the working of turbo charger. **07**
(b) Describe the emissions from C I engines. **07**
- OR**
- Q.5** (a) List all the engine performance parameters. Explain any five of them. **07**
(b) Explain the procedure to find the brake power of engine. **07**
