

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016**

**Subject Code: 2721109****Date: 25/05/2016****Subject Name: Fundamentals of I.C.Engine and Automobile****Time: 10:30 am to 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 valve timing diagram of four stroke petrol engine? **07**  
(b) What is Air capacity of engine? Discuss factors affecting it? **07**
- Q.2** (a) Discuss micro processor and micro computer applications in Automobiles. **07**  
(b) Explain working principle of synchromesh gear box. **07**
- OR**
- (b) State function of vibration damper in automobile. Describe with diagram the working of telescopic hydraulic shock absorber. **07**
- Q.3** (a) List engine components? Give important of piston rings and oil ring? Also give name of material used for these rings? **07**  
(b) Discuss valve actuating mechanism. **07**
- OR**
- Q.3** (a) Discuss in detail concept of multipoint fuel injection system? **07**  
(b) Explain CRDI system. **07**
- Q.4** (a) Explain VVT technology in IC engine? **07**  
(b) Discuss design principles of low heat rejection engine. **07**
- OR**
- Q.4** (a) Explain Distributor type pump for CI engine. **07**  
(b) Explain fuel mixture requirements in S.I engine. **07**
- Q.5** (a) Write short note on recent developments in I. C. Engine. **07**  
(b) Explain Electrical system of Automobile with necessary diagram. **07**
- OR**
- Q.5** (a) Classify various steering linkages. Explain with diagram the working of rack and pinion steering system. **07**  
(b) Write short notes on (i) Tube tyre (ii) Tubeless tyres. **07**

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