

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE – SEMESTER – VI (NEW).EXAMINATION – WINTER 2016**

**Subject Code: 2160208****Date: 24/10/2016****Subject Name: Automotive computer controlled Systems****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) List the various engine related system. Explain electronic ignition system in detail. **07**  
(b) What is a logic gates explain with application? **07**
- Q.2** (a) Explain electromagnetic sensors with their application in automobile. **07**  
(b) With neat sketch explain ABS actuators. **07**
- OR**
- (b) Explain petrol fuel injection system MPFI. **07**
- Q.3** (a) Explain principles of operation for ECU. **07**  
(b) Explain Digital to analogue and Analogue to digital conversion. **07**
- OR**
- Q.3** (a) Explain with neat sketch knock sensor. **07**  
(b) Explain supplementary restraint system (SRS). **07**
- Q.4** (a) Write short note on Actuators. **07**  
(b) Explain Optical sensors and Piezoelectric sensors. **07**
- OR**
- Q.4** (a) Discuss the brief about fundamental parts of computer. Explain computer memories. **07**  
(b) With neat sketch explain vehicle Air conditioning system. **07**
- Q.5** (a) Explain important of sensors. Also explain Oxygen sensor. **07**  
(b) Explain precaution when working with computer controlled system. **07**
- OR**
- Q.5** (a) Explain coded ignition key. **07**  
(b) Explain digital multi-meter and oscilloscope. **07**

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