

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE- SEMESTER–VI (NEW) EXAMINATION – WINTER 2020**

**Subject Code:2160208****Date:22/01/2021****Subject Name:Automotive computer controlled Systems****Time:02:00 PM TO 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|------------|---|-----------|
| <b>Q.1</b> | (a) Discuss the brief about fundamental parts of computer   | <b>03</b> |
|            | (b) Explain Computer data and list the requirements for data transfer.                                      | <b>04</b> |
|            | (c) Justify the statement “The Switching-off point is not affected by speed in electronic ignition system”. | <b>07</b> |
| <b>Q.2</b> | (a) What is duty cycle? Explain with example  | <b>03</b> |
|            | (b) How fuel pressure is regulated in MPFI system? Explain with schematic diagram.                          | <b>04</b> |
|            | (c) Explain Evaporative emission control system   | <b>07</b> |
| <b>Q.3</b> | (a) Describe Liquid Crystal Displays.   | <b>03</b> |
|            | (b) Which gates are used in vehicle Door? Explain in brief.   | <b>04</b> |
|            | (c) List the logical gate with its figure and truth table.  | <b>07</b> |
| <b>Q.4</b> | (a) Explain optical sensor.   | <b>03</b> |
|            | (b) Explain Engine coolant temperature sensor.  | <b>04</b> |
|            | (c) Explain the basic principal of variable reluctance sensor.  | <b>07</b> |
| <b>Q.5</b> | (a) Write short note on Injector tests.   | <b>03</b> |
|            | (b) Explain stepper motor operated air valve  | <b>04</b> |
|            | (c) With neat sketch explain ABS actuators  | <b>07</b> |
| <b>Q.6</b> | (a) State the practical importance of sensors.  | <b>03</b> |
|            | (b) Explain Digital Multi-meter.  | <b>04</b> |
|            | (c) Explain on board diagnostic – II (OBD-II) tools.  | <b>07</b> |
| <b>Q.7</b> | (a) Explain LED   | <b>03</b> |
|            | (b) List precaution when working with computer control system.  | <b>04</b> |
|            | (c) Explain coded ignition key system.  | <b>07</b> |
| <b>Q.8</b> | (a) 4 Give difference between Sensor, Transducer and Actuator.  | <b>03</b> |
|            | (b) Explain JK flip-flop.   | <b>04</b> |
|            | (c) Explain supplementary restraint system (SRS).   | <b>07</b> |

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