

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER- VI EXAMINATION – SUMMER 2020****Subject Code: 2160208****Date: 28/10/2020****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

	MARKS
Q.1 (a) Define MPFI system used in SI Engine.	03
(b) Distinguish between RAM and ROM.	04
(c) List various Logic gates along with symbols and truth tables.	07
Q.2 (a) List the fundamental parts of a computer.	03
(b) Justify the statement "The Switching-off point is not affected by speed in electronic ignition system".	04
(c) Describe Traction Control System.	07
OR	
(c) Explain Stability Control System.	07
Q.3 (a) Illustrate about thermistor.	03
(b) State importance of sensors.	04
(c) List the types of EGO Sensor. Explain each one.	07
OR	
Q.3 (a) Illustrate Optical Sensor.	03
(b) Describe Knock Sensor.	04
(c) Explain Digital to analogue and Analogue to digital conversion.	07
Q.4 (a) Explain LCD.	03
(b) Describe Solenoid based Actuators used in Automobile.	04
(c) Describe: (i) Variable reluctance type sensor (ii) Crankshaft position sensor.	07
OR	
Q.4 (a) Explain LED.	03
(b) Describe operation of Actuators.	04
(c) Describe: (i) ABS wheel sensor (ii) Hall effect sensor.	07
Q.5 (a) List the precautions when working with computer controlled systems.	03
(b) Explain digital multi-meter.	04
(c) Describe SRS.	07
OR	
Q.5 (a) Define Flip-Flop.	03
(b) Describe Portable flat screen oscilloscopes.	04
(c) Explain the coded ignition key system	07
