Seat No.:	Enrolment No
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GUJARAT TECHNOLOGICAL UNIVERSITY

	BE .	- SEMESTER-VI (NEW) - EXAMINATION – SUM	MER 2017
Subject	Code	2160208	Date: 01/05/2017
Subject	Name	: Automotive computer controlled Systems	
			Total Marks: 70
Instruction	ns:		
		pt all questions.	
		suitable assumptions wherever necessary.	
3.	rigure	es to the right indicate full marks.	MARKS
0.1		Short Questions	14
Q.1	1	State location of knock sensor to be placed in automobi	
	2	Write full name of MIPS.	ic.
	3	Give difference between RAM and ROM.	
	4	Give difference between Sensor and Transducer.	
	5	What is the purpose of exhaust gas recirculation?	
	6	What is adaptive operating strategy of the ECM?	
	7	What is lost spark ignition system?	
	8	State purpose of Watchdog Circuit.	
	9	Describe generic malfunction code/error code.	
	10	Fuel Gallery Pressure in a petrol injection system can be Checked by means of a pressure gauge. True or False.	e
	4.4		
	11	An oscilloscope is useful for petrol injector tests. Just the Statement.	stify
	12	State function of clamping diode used in some sole	noid
	12	operated devices.	nord
	13	An optical sensor uses a light emitter and light sensor	itive
		pick up. True or False.	
	14	A flip-flop is a switching device which has a mem	ory.
		True or False.	
Q.2	(a)	Explain AND and OR gate with automotive application	
	(b)	Describe Variable Capacitance type sensor.	04
	(c)	Explain Evaporative emission control system.	07
	(a)	OR With neat sketch explain vehicle air conditioning system	n. 07
Q.3	(c) 3 (a)	What is duty cycle? Explain with proper example.	03
Ų	(b)	Justify the statement "The Switching-off point is	
	(6)	affected by speed in electronic ignition system".	
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	affected by speed in electronic ignition system".		
(c)	Write Short note on Supplementary Restraint System	07	
	(SRS).		
	OR		
(a)	Describe Liquid Crystal Displays.	03	
(b)	State various precautions while working with computer	04	
	controlled systems.		
(c)	Explain the coded ignition key system.	07	
(a)	Explain Engine coolant temperature sensor.	03	
(b)	Explain Pulse width Modulated injector with proper	04	
	waveform.		
(c)	Explain Digital to Analog and Analog to Digital	07	
	Conversion.		
	(a) (b) (c) (a) (b)	 (c) Write Short note on Supplementary Restraint System (SRS). OR (a) Describe Liquid Crystal Displays. (b) State various precautions while working with computer controlled systems. (c) Explain the coded ignition key system. (a) Explain Engine coolant temperature sensor. (b) Explain Pulse width Modulated injector with proper waveform. (c) Explain Digital to Analog and Analog to Digital 	

OR

Q.4	(a)	Write short note on Injector tests.	03
	(b)	Describe Solenoid based Actuators used in Automobile.	04
	(c)	Explain On Board Diagnostic II (OBD-II) tools.	07
Q.5	(a)	How fuel pressure is regulated in MPFI system? Explain with schematic diagram.	03
	(b)	Explain various computer memories.	04
	(c)	Describe Stability Control System in detail.	07
		OR	
Q.5	(a)	Describe Stepper motor operated Air valve.	03
	(b)	Write short note on variable capacitance type Manifold Absolute Pressure (MAP) sensor.	04
	(c)	Explain Computer Controlled Diesel Engine System.	07
