



USN 

--	--	--	--	--	--	--	--	--	--

10MT55

**Fifth Semester B.E. Degree Examination, June/July 2019**  
**Automotive Electronics**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting at least TWO questions from each part.**

**PART – A**

- 1 a. Explain four stroke SI cycle, with neat sketch. (10 Marks)  
b. Explain the operation of battery system. (06 Marks)  
c. Write a short note on spark plug. (04 Marks)
- 2 a. Explain the operation of fuel delivery system. (10 Marks)  
b. Write short notes on:  
i) Exhaust Gas Oxygen sensor (EGO); ii) Hall effect position sensor. (10 Marks)
- 3 a. Explain the working of fuel metering actuator. (10 Marks)  
b. Explain the operation of evaporative emission system. (10 Marks)
- 4 a. Explain the following :  
i) Power  
ii) BSFC  
iii) TORQUE  
iv) Thermal efficiency  
v) Calibration (10 Marks)  
b. Explain the working operation of digital engine control system, with neat block diagram. (10 Marks)

**PART – B**

- 5 a. Explain the operation of Controller Area Network, in detail. (10 Marks)  
b. Explain the working operation of Global Positioning System, with neat diagram. (10 Marks)
- 6 a. Explain with neat diagram, the working operation of Antilock Braking System. (10 Marks)  
b. Explain the working of Electronically Controlled Suspension System. (10 Marks)
- 7 a. Define sampling. Mention the advantages of computer based instrumentation. (10 Marks)  
b. Explain the operation of coolant temperature measurement system. (10 Marks)
- 8 Write short notes on :  
a. Collision avoidance radar warning system  
b. ON – Board diagnostics  
c. Low tyre pressure warning system  
d. Signpost navigation. (20 Marks)

\* \* \* \* \*

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.