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

## Fifth Semester B.E. Degree Examination, Dec.2018/Jan.2019 **Automotive Electronics**

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

## PART - A

| 1 | a. | Classify IC engines. Explain 4 stroke diesel engine cycles with neat diagram.  | (10 Marks)    |
|---|----|--|---------------|
|   | b. |  | (10 Marks)    |
|   |    |  | (             |
| 2 | a. | Explain the air fuel handling system with neat sketch.   | (08 Marks)    |
|   | b. | Elucidate construction and working of lambda sensor.   | (06 Marks)    |
|   | c. | With the neat sketch explain the construction and working of hall-effect sensor.   |               |
|   | C. | with the heat sketch explain the construction and working of half-effect sensor.   | (06 Marks)    |
| 3 | 0  | What do you mean by first matering? Explain with next already the first matering   | o otract o a  |
| 3 | a. | What do you mean by fuel metering? Explain with neat sketch the fuel metering  | actuator.     |
|   | b. | With the block diagram explain construction and working of EGR.  | (10 Marks)    |
|   | υ. | with the block diagram explain construction and working of EGR.  | (10 Marks)    |
| 4 | 0  | Define the fellowing.  |               |
| 4 | a. | Define the following:  |               |
|   |    | i) Power   |               |
|   |    | ii) BSFC   |               |
|   |    | iii) Torque  |               |
|   |    | iv) Thermal efficiency.  |               |
|   |    |  | (08 Marks)    |
|   | b. | With the neat sketch explain the electronic fuel control system.   | (08 Marks)    |
|   | C. | Write a short note on idle speed control.  | (04 Marks)    |
|   |    |  |               |
|   |    |  |               |
|   |    | PART – B   |               |
| _ |    | Montion the toward CDIC  | (40.75        |
| 5 | a. | Mention the types of BUS system and explain any one.   | (10 Marks)    |
|   | b. | What do you mean by GPS? Explain the working operation of GPS.   | (10 Marks)    |
|   | 9  |  |               |
| 6 | a. | With the neat sketch explain Anti-lock braking system.   | (10 Marks)    |
|   | b. | Explain electronic suspension system with neat diagram.  | (10 Marks)    |
|   |    |  |               |
| 7 | a. | What do you mean by sampling? Explain working operation of the same.   | (10 Marks)    |
|   | b. | Explain the working operation of fuel quantity measurement.  | (10 Marks)    |
|   |    |  |               |
| 8 | a. | Explain the working of collision avoidance radar warning system with the block   | k diagram     |
| - |    | by several with the store  | (10 Marks)    |
|   | b. | Write a short note on off-board diagnosis.   | (10 Marks)    |
|   | •  | The state of the s | (20 11401410) |

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