1964

Code : 15AT62T

Register Number | | | | | | | | | | |

VI Semester Diploma Examination, Nov./Dec. 2018

AUTOMOTIVE ELECTRONICS

Time : 3 Hours] **[Max. Marks : 100**

Instructions : (1) Answer any **six** questions from Part – A and each question carries **5** marks.

(2) Answer any **seven** questions from Part – B and each question carries **ten** marks.

PART – A

1. Explain the need of signal conditioning with steps involved. **5**

2. Convert the number $53_{(10)}$ into equivalent binary number and $1101_{(2)}$ into equivalent decimal number. **5**

3. Explain the working of closed loop control system with block diagram. **5**

4. State the meaning of actuator and list types of actuators used in engine control system. **5**

5. Explain the need of electronic diesel injection system in Automobile. **5**

6. Draw the sketch of electronic Common Rail Diesel Injection (CRDI) system and label the parts. **5**

7. Explain the working of four channel anti-lock braking system with block diagram. **5**

8. Explain the construction and working of accelerometer type air bag system with block diagram. **5**

9. Explain the computer based instrumentation system with block diagram. **5**

[Turn over

PART – B

10. Explain the working of AND and OR gates with logic symbols and truth tables.

11. (a) Write a short notes on flip flops.
    (b) Explain the meaning of CAN and state its merits.

12. Explain the working of computer (ECU) with its microprocessor with a block diagram.

13. (a) Explain the working of throttle position sensor with circuit diagram.
    (b) Explain the working of LVDT type position sensor with circuit diagram.

14. Explain the construction and working of combustion knock sensor with sketch.

15. Explain the construction and working of exhaust gas oxygen sensor with sketch.

16. Explain the construction and working of multi point fuel injection system with block diagram.

17. Explain the working of collision avoidance warning system with a block diagram.

18. Explain the working of electronic suspension system with block diagram.

19. Write short note on :
    (a) relay
    (b) fuel quantity measurement system