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Question Paper Code : Q 2796

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Seventh Semester

Mechatronics Engineering

MH 1402 — AUTOMOTIVE ELECTRONICS

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Give the Euro IV standards.
2. Explain cut-out used in charging circuit.
3. Write a short note on engine cylinder arrangements.
4. What is sequential fuel injection system?
5. Brief about stepper motor used in fuel injection system.
6. What are the advantages of engine crankshaft angular position sensor?
7. Give the ignition control methodologies used in engine control systems.
8. What is CAN standard?
9. What is the role of MEMS in airbag systems?
10. How is centralised door locking system working?

PART B — (5 × 16 = 80 marks)

11. (a) Describe the working and design of charging circuit diagram. (16)

Or

- (b) Draw performance characteristics of starter motor and explain the starter circuit. (16)

12. (a) Describe the working of Electronic ignition system for 4-cylinder in line engine system. (16)

Or

- (b) How does solex carburettor work? Discuss with neat sketch. (16)

13. (a) Explain the working of exhaust gas oxygen sensors. (16)

Or

- (b) Describe the working of exhaust gas recirculation valve. (16)

14. (a) By using block diagram explain about electronic engine management system. (16)

Or

- (b) Discuss the features of the different diagnostics systems used in modern automobiles. (16)

15. (a) Describe the working of electronically controlled automatic transmission system. (16)

Or

- (b) Explain the working of electronic suspension system. (16)