

Sem VIII / CBGS / AUTO / AUTOTRONICS / M-J-16

QP Code : 732301

(3 Hours)

[Total Marks : 80

- N.B.:** (1) Question no 1 is compulsory.
 (2) Attempt any three out of remaining five questions.
 (3) Figures to the right indicate full marks.
 (4) Illustrate your answers with sketches wherever necessary.

1. (a) Compare the following:
- (i) Magneto and Coil Ignition system 5
 - (ii) Spark plug and Glow plug 5
 - (iii) Fuse and Circuit Breaker 5
 - (iv) Alkaline Battery and Alkaline Fuel Cell 5
2. (a) Explain the following with neat labelled diagram:
- (i) Knock Sensor 5
 - (ii) Methanol Sensor 5
- (b) Explain construction, working of Solenoid and Thermal actuators. 10
3. (a) Define Battery and Fuel Cell. Explain construction and working principle along with reactions for Lead Acid Battery. 10
- (b) Explain any two potential applications of 42 V technology. 10
4. (a) Explain principle of operation of Generator. How is it different from Alternator? 10
- (b) Explain any one of each type of Inertia type and Pre engaged type starter motor drive. 10
5. (a) Explain Capacitor Discharge and Distributor less ignition system. 10
- (b) What is wiring harness? Draw a typical wiring diagram for a car and indicate various systems. 10
6. (a) Write note on :
- (i) Automotive Embedded system 5
 - (ii) Telematics and its applications 5
- (b) Explain the following:
- (i) CAN System and its proposed architecture. 5
 - (ii) Electronic Control Modules and its Operating modes 5