

Sem VIII / CBS GS / AUTO / ND-19  
(3 Hours)

04/12/2019

(Total Marks : 80)

- N. B. :** (1) Question No. 1 is compulsory.  
(2) Attempt any three questions out of remaining five questions.  
(3) Justify your answer with neat sketches.

1. A) Write short note on any Four of the following : 20
- a) Requirement of battery
  - b) Need of 42V automotive electrical system.
  - c) Requirements of starting system
  - d) Direct Ignition System.
  - e) Optical Sensor.
  - f) Electronic flasher circuit.
2. A) Explain the various cables, their size, color codes and wiring harness systems used in automotive vehicles. 10
- B) Explain Operating modes of ECM (closed loop & open loop). 10
3. A) Explain fuel gauge and oil pressure gauge. 10
- B) Explain motorized and thermal actuator. 10
4. A) Describe construction and working of alternator. 10
- B) Explain Hall Effect pulse generator and Inductive pulse generator. 10
5. A) Explain Working of alkaline and Zebra batteries. 10
- B) Explain Folo through Barrel and Rubber compression starter motor drive. 10
6. A) Constructions and Operation of proton Exchange membrane fuel cell. 10
- B) Explain Regulators and Combined current & voltage regulator. 10