

N-Scheme Model Examination Question Paper*Time : Three hours*(Maximum Marks : 100)

*[N.B : (1) For Part - A. Answer All Questions. All question carry equal marks. (3x10 = 30)
(2) For Part - B. Answer all questions by choosing either A or B. (14 x 5 = 70)*

PART – A**(3x10 = 30)**

1. Define electric current and define electric resistance.
2. Define: Voltage and flux density with their units.
3. What is solenoid actuator and its specific applications
4. Name few types of relays.
5. What is side light.
6. What is reversing
7. Enlist few purpose of ignition system
8. Name major components of earlier ignition system.
9. What is micro processor
10. What is micro controller

PART – B**(14x5 = 70)**

11. (a) (i) State and explain theory of electron flow and conventional flow.
(ii) State and discuss properties of conductors, insulators and semi conductors.
(or)
(b) (i) State and explain ohm's law and kirchoff's law in detail.
(ii) Briefly discuss about electromagnetic induction and mutual induction.

12. (a) (i) With a neat sketch explain the wiper circuit in a car.
(ii) With a neat sketch explain the cooling fan circuit in a car.

(or)

- (b) (i) Explain charging system principle with neat sketch.
(ii) Explain alternator principle with neat sketch.

13. (a) (i) Draw the complete lighting circuit of a car.
(ii) Explain briefly about head light leveling and beam setting.

(or)

- (b) (i) Explain about electric and pneumatic type wind screen wiper system.
(ii) Explain construction & working of wind shield washer system in a car.

14. (a) (i) Brief about vehicle speed sensor
(ii) Brief about scan tool in diagnosing engine.

(or)

- (b) (i) Briefly about the testing procedure TP sensor
(ii) Name major parts used in CRDI circuit

15. (a) (i) Explain various types of connectors in microprocessor controlled system.
(ii) Explain with a of neat sketch on electrical motor control system.

(or)

- (b) (i) Explain clearly about MCB and ELLB.
(ii) Briefly discuss about role of electric vehicle technology.