23ELU627B

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2025
(Sixth Semester)

Branch – **ELECTRONICS**

MAJOR ELECTIVE COURSE – II AUTOMOTIVE ELECTRONICS

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1. Which of the following is the component of lead acid battery?
   i) Container ii) Plates
   iii) Separator iv) All are correct
2. Which of the following is the disadvantage of the magneto ignition system?
   i) Magneto ignition system has a poor quality of spark during starting
   ii) Magneto ignition system occupies more space
   iii) Magneto ignition system has more maintenance problems
   iv) Magneto ignition system is used largely in four wheels
3. Crankshafts are usually constructed by _____.
   i) Casting ii) Drop forging
   iii) Drawing iv) Extrusion
4. What are the types of Multi-Point Fuel Injection System?
   i) port injection ii) throttle body injection
   iii) port & throttle body injection iv) none of the mentioned
5. In modern vehicles, the headlight dimming switch is mounted on the _____
   i)Dashboard ii)Floor
   iii)Side panel iv)Steering column

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6. a. Write few purposes for the usage of battery.
   OR
   b. Give the principle of AC generator.

7. a. How is direct ignition used in automotive?
   OR
   b. Define the function of distributor less ignition system.

8. a. How does a crankshaft position sensor work?
   OR
   b. What is the throttle angle?

9. a. What are the types of fuel control units?
   OR
   b. What is the use of electronic fuel injection?

10. a. Define connectors.
    OR
    b. Define earth return system.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11 a. Discuss the working principles of starter motor types, construction and characteristics with a neat diagram.

OR

b. Explain in detail about charging system with a neat diagram.

12 a. Draw a neat diagram and explain the working principles of electronic ignition systems.

OR

b. Explain the transistor ignition system.

13 a. Discuss in detail the exhaust oxygen sensor.

OR

b. Briefly explain the characteristics of the air flow rate sensor.

14 a. Discuss the merits and demerits of the electronic fuel injection system.

OR

b. Explain the power train control model.

15 a. Discuss in detail about head light and side light.

OR

b. Explain the wipers system and trafficator fuses.

Z-Z-Z END