



C23-EE-502

23634

BOARD DIPLOMA EXAMINATION, (C-23)

MARCH/APRIL—2026

DEEE – FIFTH SEMESTER EXAMINATION

ELECTRIC VEHICLE TECHNOLOGY

Time : 3 Hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define Electric vehicle and state the need of EV.
2. Classify the electric vehicles according to the sources of power.
3. List any six advantages of parallel hybrid system.
4. List any three impacts of EVs/HEVs on economy.
5. Define (a) State of charge and (b) State of discharge.
6. Write the charging and discharging equation of NI-Cd cell.
7. List any six advantages of wireless charging.
8. What is battery swapping?
9. Classify the electric drives based on applications.
10. List the advantages of regenerative braking system.

PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain Battery Electric Vehicle (BEV) with a neat block diagram.
12. Explain Fuel Cell Electric Vehicle with a neat block diagram.
13. Explain series-parallel hybrid electric vehicle with a neat block diagram.
14. Explain ultra capacitor storage system with a neat sketch.
15. Explain Nickel-Cadmium battery system with a neat sketch.
16. Explain battery management system with a neat block diagram.
17. Explain the method of plugging with a neat sketch.
18. Explain the block diagram of an Electric Drive and state the functions of each block.

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