

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Voc. (Automobile Servicing) (Sem.-4)

ELECTRICAL & HYBRID VEHICLES-II

Subject Code : 6.GV.08

M.Code : 79995

Date of Examination : 13-07-22

Time : 3 Hrs.

Max. Marks : 30

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying ONE mark each.
2. SECTION-B contains FIVE questions carrying $2\frac{1}{2}$ (Two and Half) marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying FIVE marks each and students have to attempt any TWO questions.

SECTION-A

1. **Write briefly :**
 - a) Define CVT.
 - b) What do you understand by load tracking architecture?
 - c) Illustrate energy storage technology.
 - d) What are the different types of batteries?
 - f) Write about the proton exchange membrane.
 - g) Define PEM.
 - h) Brief about ultra-capacitors.
 - i) Write about accumulators for non-electric hybrid systems.
 - j) Give some examples of hybrid vehicles in India.

SECTION-B

2. Explain in detail about braking and energy recuperation.
3. How does the matching of electric drive and ICE done?

4. What are the characteristics of fuel cell?
5. Describe in detail about NiCd battery.
6. Discuss about the short term storage systems used in non-electric hybrid systems.

SECTION-C

7. Explain in detail about pre transmission parallel and combined configurations Mild hybrid system.
8. Write note about :
 - a) Battery parameters
 - b) Role of flywheel accumulators in non-electric hybrid systems.
9. Discuss in detail about Lead acid battery and Lithium-ion battery. Also, write their merits and demerits.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.