

SECTION-B

Note: Short answer type questions. Attempt any six questions out of Eight questions. (6x5=30)

- Q.11 Write a short note on Social and Environmental Importance of Hybrid & Electric Vehicle.
- Q.12 What are the different Parts of an Electric Motor? Write their function.
- Q.13 Define Electric Traction Systems. Write their types. Explain any one.
- Q.14 Explain parallel and series hybrid drive trains.
- Q.15 Write in brief about Power Flow Control in Parallel Hybrid Electric Drive Trains.
- Q.16 What are the Key Components of a Hybrid Electric Car? Explain any three.
- Q.17 What is regenerative braking and why is it more efficient?
- Q.18 Write in brief about the use of shock absorbers as vibration energy harvesters.

SECTION-C

Note: Long answer type questions. Attempt any one questions out of two questions. (10x1=10)

- Q.19 Explain the working principle of DC motor as applied in electric vehicles.
- Q.20 Explain in detail regenerative braking system.

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**DVOC (Level 5) Semester-I/Trade DVOC
(Auto. Servicing, AMT)**

Subject : Modern Electric and Hybrid Vehicles

Time : 2 Hrs.

M.M. : 50

SECTION-A

Note: Very short answer questions. Attempt all ten questions. (10x1=10)

- Q.1 Hybrid electric vehicle (HEV)
- Q.2 Global Warming
- Q.3 DC Electrification System
- Q.4 Electric drive train
- Q.5 Power flow
- Q.6 Power convertor
- Q.7 Power Modulator
- Q.8 Electric traction motor
- Q.9 Piezoelectric Material
- Q.10 hydraulic regenerative shock absorbers

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