

Total No. of Questions : 4]

SEAT No. :

P-5338

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[6188]-315

**B.E. (Mechanical) (Honors) (Insem)**  
**MODELLING AND SIMULATION OF EHV**  
**(2019 Pattern) (Semester-VII) (402034)**

*Time : 1 Hour]*

*[Max. Marks : 30*

*Instructions to the candidates :*

- 1) *Answer Q.1 or Q.2, Q.3 or Q.4*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume Suitable data if necessary*

- Q1)** a) Define motor drives for electric vehicles with its advantage and requirements. [8]
- b) Explain Basic Elements of the Electric Drive Systems with neat sketch. [6]

OR

- Q2)** a) Classify EV motor drives with its comparative analysis. [6]
- b) Explain DC motor drives with its working principal, advantages, disadvantages and applications. [8]

- Q3)** a) Define energy storages, explain with its classifications. [8]
- b) Explain the constructional details of li-ion battery with its advantages, disadvantages and applications. [8]

OR

- Q4)** a) Compare types of battery cooling with its advantages and disadvantages. [8]
- b) Explain NVH analysis with its importance in electric vehicles. [8]

