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Question Paper Code: 95T18

M.E. DEGREE EXAMINATION, MAY 2022

Elective

Power electronics and Drives

19PPE518- ELECTRIC VEHICLES AND POWER MANAGEMENT

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Explain the construction and control of Electric Vehicles. CO1- U (20)
Or
(b) Discuss the various hybrid control strategies in Hybrid Electric Vehicles with neat diagram. CO1- U (20)
2. (a) Explain the Architecture of HEV's with necessary diagram. CO2- U (20)
Or
(b) Explain the fundamentals of Plug-n Hybrid Electric Vehicles (PHEV)with necessary diagram. CO2- U (20)
3. (a) Explain the four quadrant operation of DC/DC chopper based to control the DC drives CO3- U (20)
Or
(b) Discuss the motoring and braking operation of induction motor drive using V/F control. CO3- U (20)
4. (a) Explain briefly about the Traction Batteries. CO4- U (20)
Or
(b) Discuss the modelling procedure of Li battery with necessary equations. CO4- U (20)
5. (a) Explain the fundamentals of hydrogen storage system with necessary diagram CO5- U (20)
Or
(b) Draw and explain the Fuel Cell structure and its characteristics. CO5- U (20)

