Total No. of Questions – [03]

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PRN. No.	

PAPER CODE	

MAY 2022-ENDSEM EXAM

T.Y. B. Tech (MECHANICAL) (SEMESTER - II)

COURSE NAME: HYBRID AND ELECTRIC VEHICLES

COURSE CODE: MEUA32182C

(PATTERN 2018)

Time: [1Hr]

[Max. Marks: 30]

Instructions to candidates:

1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data where ever required**

Marking Scheme

Q.1 a) Elaborate series-parallel hybrid drive train ---2 Marks [4]
series-parallel hybrid drive Fig? ---2Marks

b) what is design of power control strategies for HEVs involves [6]
different considerations----Each 1 Marks

OR

b) Justify power flow control in series hybrid----3marks [6]
help of neat sketch-----3marks

Q2 a) Elaborate deterministic rule-based control strategy in HEV--- [4]
1marks each point

b) Enumerate federal test procedure (FTP-75) drive cycle--3M [6]
with necessary parameters—3Marks

OR

b) Discuss fundamental of regenerative braking system----6M [6]

Q.3 a) Examine two transistor model of SCR---4M [4]

b) what is rectifier and how to regulate DC power supply use [6]
with suitable figure? 3M each

OR

b) Classify Silicon Control Rectifier protection---2 Marks [6]
and elaborate any one method---4marks