

Total No. of Questions – [03]

Total No. of Printed Pages: [01]

PRN. No.	
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PAPER CODE	V 321-262C (ESE)
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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

- Q.1 a)Elaborate series-parallel hybrid drive train configuration in HEV? [4]
- b)what is design of power control strategies for HEVs involves different considerations? [6]
- OR**
- b)Justify power flow control in series hybrid with the help of neat sketch? [6]
- Q2 a) Elaborate deterministic rule-based control strategy in HEV? [4]
- b)Enumerate federal test procedure (FTP-75) drive cycle with necessary parameters? [6]
- OR**
- b) Discuss fundamental of regenerative braking system? [6]
- Q.3 a)Examine two transistor model of SCR? [4]
- b)what is rectifier and how to regulate DC power supply use with suitable figure? [6]
- OR**
- b) Classify Silicon Control Rectifier protection and elaborate any one method? [6]