

Total No. of Questions : 8]

SEAT No. :

P2297

[Total No. of Pages : 2

[5254]-631

B.E. (Electrical) (End sem)

**INTRODUCTION TO ELECTRICAL TRANSPORTATION
SYSTEMS (Elective – II)
(2012 Pattern)**

Time : 2:30 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Solve Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.*
- 2) *Figures to the right indicates full marks.*

- Q1)** a) What is the role and importance of the transportation system? Explain the factors affecting transportation system. [8]
- b) Explain different types of batteries with their characteristics. [12]

OR

- Q2)** a) What are the advantages and disadvantages of Electric traction? [4]
- b) Explain various power quality issues of charging electric vehicles. [6]
- c) Explain the working of Ni-cd battery with neat diagram and its characteristics. [10]

- Q3)** a) Explain various components of electric wheel chair. [8]
- b) Draw & Explain block diagram of BLDC motor. [8]

OR

- Q4)** a) Explain smart traffic control with their benefits. [8]
- b) Draw & explain electric power steering. [8]

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- Q5)** a) Explain DC and AC traction systems with their applications. [8]
b) Explain the various components and working of hybrid vehicle with a neat diagram. [10]

OR

- Q6)** a) Explain the types of mechanical drives used in transportation systems. [8]
b) Explain the power train architecture of high speed rail. [10]
- Q7)** a) Draw & Explain load characteristics of Elevator systems. [8]
b) Describe the concept of special purpose vehicles. [8]

OR

- Q8)** a) Explain the control scheme used in different types of elevators. [8]
b) Draw and explain an acceleration and speed characteristics of hybrid car. [8]

