Total No. of Questions : 8]

P1996

SEAT No. :

[Total No. of Pages : 2

[5059]-591

B.E. (Electrical)

INTRODUCTION TO ELECTRICAL TRANSPORTATION SYSTEMS

(End Sem.) (2012 Pattern) (Elective - II)

Time : 2.30 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answer any 4 questions from or questions.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Your answers will be valued as a whole.***
5) ***Assume suitable data, if necessary.***

Q1) a) What is the role of AC machines in Electric Vehicle? Explain in detail. **[8]**

b) What is meant by Electric Traction? Mention the different voltage level used in Electric Traction and explain the various types of Electric traction. **[12]**

OR

Q2) a) What are the various performance criteria of battery used in transportation system? **[10]**

b) Explain the working of DC- AC converter in Hybrid vehicle. **[10]**

Q3) a) What are the components of motion control? Explain them in detail with a neat diagram. **[9]**

b) What are the factors affecting the road traffic crashes? What is traffic monitoring? Why traffic monitoring control is required? **[9]**

OR

Q4) a) With help of neat diagram explain Mechanical Power Steering. **[9]**

b) With help of neat diagram explain the speed control and acceleration characteristic related with one transportation system. ? **[9]**

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Q5 a) Explain the application of AC traction in high speed rail. **[8]**

b) Explain in detail one of the configurations of hybrid cars with a neat diagram. **[8]**

OR

Q6) a) Compare AC and DC type of traction. **[6]**

b) Write the performance of AC traction under various operating condition and its control scheme. **[10]**

Q7) a) With neat diagram explain the control scheme used in traction type of elevators. **[10]**

b) What are the considerations of energy efficient systems? **[6]**

OR

Q8) a) What is elevator? Explain the different types of elevator. **[10]**

b) Define the following related with elevator **[6]**

i) Handling capacity

ii) Average trip time

iii) Waiting time