

Roll No.

Total Pages : 2

BT-8/M-20

38038

SPECIAL ELECTRIC MACHINES

Paper–EEcT-406E

Option–II

Time Allowed : 3 Hours]

[Maximum Marks : 100

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit.

UNIT-I

1. Write short notes on the following :
 - (a) Capacitor start capacitor run single phase induction motor. 10
 - (b) Double revolving field theory. 10
2. (a) Out of the following appliances, what type of motor you would prefer to use and justify :
Sewing machine, Electric locomotive, Portable electric drill, Mixer grinder and Elevator? 10
- (b) Draw and explain the torque speed curve of a single phase Induction motor. 10

UNIT-II

3. What do you mean by Levitation ? Explain in detail linear levitated machines and their applications. 20

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4. (a) Explain the construction of Schrage Motor in detail. 10
- (b) Explain the effect of EMF injected into secondary circuit. 10

UNIT-III

5. Discuss in detail the power generation in case of the following :
- (a) Wind turbine. 10
- (b) Tidal waves. 10
6. Discuss the following with suitable sketches :
- (a) Solar Energy Generation set up. 10
- (b) Bio-gas Energy Generation set up. 10

UNIT-IV

7. (a) How is a brushless DC motor different from a normal DC motor ? Explain. 10
- (b) Explain the working of Shaded pole motor and its uses. 10
8. (a) What is a Servomotor ? Which factor should be considered while selecting the Servomotor ? 10
- (b) Explain the working of Stepper motor, its classification, merits and demerits. 10