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Question Paper Code : 20522

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2022.

Sixth Semester

Electrical and Electronics Engineering

EE 8601 – SOLID STATE DRIVES

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Draw the block diagram of electric drive.
2. Mention the different factors for the selection of electric drives?
3. What are the advantages in operating choppers at high frequency?
4. A DC motor has an armature current of 110 A at 480 V. The armature resistance is 0.2 ohms. The motor has 6 poles and armature has a lap winding with 864 conductors. The flux per pole is 0.05 Wb. Find speed and torque.
5. Draw the complete speed-torque curve of an induction machine.
6. Compare static kramer and static scherbius drive system.
7. In variable frequency control of synchronous motor, V/F ratio is maintained constant up to base speed, why?
8. What are the modes of speed control of a synchronous motor?
9. What are the advantages of using PI controller in closed loop control of DC drive?
10. What is field weakening mode control?

