

QUESTION BANK 2 (I Scheme)

Course: Industrial Drives & Control
Course Code: (22629)
Semester: 6I

Course Abbreviation: IDC
Unit Test: II
Program Code: EE

CHAPTER 3: DC Drive using choppers (8 mks) (CO3)

2 Marks

1. Chopper based drives are more preferable to converter based drives, state any two reasons.
2. Draw the circuit diagram of basic chopper using SCR.

4 Marks

3. Draw and describe class D chopper drive.
4. Draw and describe four quadrant chopper drive.
5. Describe the working of two quadrant operation of DC drives. Describe the working of any one type solar powered pump drive.

CHAPTER 4: AC Drives (16 mks) (CO4)

2 Marks

6. List various methods of control the speed of AC drive.
7. List eight industrial applications of drives.
8. List advantages of induction motor drive over DC motor drive.
9. Draw a circuit diagram of rotor resistance control method for induction motor.
10. State the concept of slip power recovery system.

4 Marks

11. Compare DC and AC drives.
12. Describe the stator voltage control method of three phase induction motor with circuit diagram.
13. Draw the block diagram of constant V to F control method and describe it's working.
14. Describe the working of variable frequency control using square wave inverter.
15. Comparison between stator voltage control, constant V/f Control & rotor resistance control.
16. List no of stages involved in paper mill. Which type of motor/drives used at each stage?
17. State the stages involved in textile mills and type of drives used for it.

CHAPTER 5: Advanced techniques of Motor Control (12 mks) (CO5)

2 Marks

18. Draw a block diagram of microprocessor based DC motor controller.
19. State the rating and specification of stepper motor.
20. List the functions performed by microprocessor in speed control of industrial drives.

4 Marks

21. Draw labeled block diagram of phase lock loop (PLL) control DC motor drive. State the function of each block.
22. Describe role of microprocessor for speed control of DC motor with neat diagram.
23. Describe role of microprocessor for speed control of AC motor with neat diagram.
24. Describe the operation of Stepper motor drives employing microcontroller.
25. Draw the block diagram of synchronous motor drive and state function of each block.