

Unit 2: DC Motor Drives

1. Regenerative braking is not possible in a series motor.

1. True
2. False

Answer: 1

2. Which braking method is the best method for obtaining high braking torque?

1. Regenerative braking
2. Plugging
3. Dynamic braking
4. Rheostatic braking

Answer: 2

3. The polarity of back e.m.f changes in which of the method?

1. Plugging
2. Regenerative braking
3. Dynamic braking
4. Rheostatic braking

Answer: 1

4. To save energy during braking-----braking is used?

1. Dynamic
2. Plugging
3. Regenerative
4. All of the above

Answer: 3

5. The concept of V/f control of inverters driving induction motors results in

1. Constant torque operation
2. Speed reversal
3. Reduced magnetic loss
4. Harmonic elimination

Answer: 1

6. Which of the following are electrical braking methods ?

1. Plugging
2. Dynamic
3. Regenerative
4. All of the above

Answer: 4

7. Which braking is not possible in series motor?

1. Regenerative braking.
2. Dynamic braking.
3. Counter current braking.
4. Rheostat braking.

Answer: 1

8. In industries which electrical braking is preferred?

1. Regenerative braking.
2. Plugging.
3. Dynamic braking.
4. None of the above.

Answer: 1

9. In 4 quadrant operation of a hoist 3rd quadrant represents

1. Reverse motoring.
2. Reverse braking.
3. Forward braking.
4. Forward motoring.

Answer: 1

10. High braking torque produced in

1. Plugging.
2. Dynamic braking.
3. Regenerative braking.
4. None of above.

Answer: 1

11. Which of the following motors is preferred when quick speed reversal is the main consideration?

1. Squirrel cage induction motor
2. Wound rotor induction motor
3. Synchronous motor
4. DC motor

Answer: 4

12. What is the function of the freewheeling diode in a phase controlled rectifier?

1. To improve input power factor
2. To make the load current continuous
3. Both (1) & (2)
4. Neither (1) nor (2)

Answer: 3

13. What is the main function of chopper?

1. Chopper converts fixed ac voltage into variable dc voltage
2. Chopper converts fixed dc voltage into variable dc voltage
3. Chopper converts variable dc voltage into variable dc voltage
4. Chopper converts fixed ac voltage into variable ac voltage

Answer: 2

14. Separately excited motors have

1. Excitation which is independent of load current
2. The advantage over self excited motor that it can be utilised for zero volt to its maximum rated capacity
3. Both 4. None of the above

Answer: 3

15. The plugging gives the

1. Smallest torque breaker
2. Highest torque breaker
3. Zero torque breaker
4. None of them

Answer: 2

16. Which of the method of breaking will be selected if the highest braking torque is required?

1. Plugging
2. Dynamic braking

- 3. Counter braking
- 4. Regenerative braking
- 5. (1) or (3)

Answer: 5

17. In Chopper Control of Separately Excited DC Motor, Self-commutated device like MOSFET, IGBT, power transistors, GTO and IGCT are used for making choppers because they can be commutated by

- 1. Low power control signal
- 2. Do not need commutation circuit.
- 3. Both 1 & 2
- 4. Neither 1 nor 2

Answer: 3

18. The most important feature of chopper control is the

- 1. Regenerative braking
- 2. Plugging
- 3. Rheostatic
- 4. Mechanical braking

Answer: 1

19. Feedback/closed loops in an electrical drive may be provided to satisfy the following requirements.

- 1. Enhancement of speed of torque
- 2. To improve steady-state accuracy.
- 3. Protection
- 4. All of the above

Answer: 4

20. The main parts of the closed-loop system are

- 1. The controller & converter,
- 2. Current limiter & current sensor
- 3. Both 1 & 2
- 4. Only 1

Answer: 3

21.is used to limit the converter and motor current below a safe limit during the transient operation.

- 1. Current limit control
- 2. Closed-Loop Torque Control
- 3. Closed-Loop Speed Control
- 4. None of the above

Answer: 1