Unit 4: Induction Motor Drives II

1. _____ duty cycle consist of frequent on load and off-load period.
1. Continuous Duty with constant Load
2. Continuous Duty With the variable load
3. Short Time duty
4. Intermittent duty

Answer: 4

2. Which duty cycle is preferred if the load requires a constant power for short period of time
and rest for sufficient longer duration?
1. Short Time duty
2. Intermittent duty
3. Intermittent duty with starting
4. Intermittent duty with starting and braking

Answer: 1

3. Which of the following motors is preferred for traction work?
1. Synchronous Motor
2. 3 phase induction motor
3. DC Shunt Motor
4. Single phase induction motor

Answer: 2

4. Which motor is preferred for overhead travelling cranes?
1. Intermittent periodic motor
2. Continuous duty motor
3. Slow speed duty motor
4. Short time rated motor

Answer: 1

5. Which motor duty class is used, when the motor is running long enough AND the electric motor temperature reaches the steady state value?
1. Continuous duty
2. Short time duty
3. Intermittent periodic duty
4. Intermittent periodic duty with starting

Answer: 1

6. In Short Time Duty, the time of operation is
1. Low
2. Very low
3. Very high
4. Not predicted

Answer: 2

7. In Short Time Duty, the heating time is much
1. Lower than the cooling time
2. Higher than the cooling time
3. Equal to the cooling time
4. None of them

Answer: 1

8. Which motor duty class exist the sentence : the motor operates for some time and then

there is rest period
1. Short time duty
2. Intermittent periodic duty
3. Intermittent periodic duty with starting
4. Intermittent periodic duty with starting and braking
Answer: 2
9. In Intermittent Period Duty with Starting,
1. The motor is running long enough & the electric motor temperature reaches the steady state value
2. The motor operates for some time and then there is rest period
3. There is a period of starting, which cannot be ignored and there is a heat loss at that time.
4. There are different running periods at different loads and speeds.
Answer: 3
10. Intermittent Period Duty with Starting is widely used in
1. Metal cutting
2. Drilling tool drives
3. Mine hoist
4. All of the above
Answer: 4
11. In Intermittent Periodic Duty with Starting and Braking the corresponding periods are
1. Starting period
2. Operating period
3. Braking period
4. Resting period
5. All of the above
Answer: 5
12. Application of Intermittent Periodic Duty with Starting and Braking is
1. Compressors
2. Conveyors
3. Manipulator drive
4. Crane drives
Answer: 3
13. Example of Continuous Duty with Intermittent Periodic Loading is
1. Pressing
2. Cutting
3. Both 1 & 2
4. None of them
Answer: 3
14. Example of Continuous Duty with Starting and Braking is
1. Blooming mill
2. Metal cutting
3. Drilling tool drives
4. Mine hoist
Answer: 1
15. In Continuous Duty with Periodic Speed Changes, there are different running periods at different loads and speeds but there is..... period and all the periods are.....to

attain the steady state temperatures.
1. no rest, too short
2. rest, long
3. no rest, too long
4. rest, too short
Answer: 1
16. The motor enclosure used in wood-working industry is
1. Protected type
2. Totally enclosed fan cooled type
3. Flame proof type
4. Splash proof type
Answer: 2
17. The motor enclosure used for industrial purposes is
1. Protected type
2. Drip proof type
3. Totally enclosed type
4. Open type
Answer: 1
18. Which of the following types of motor enclosure is safest?
1. Totally enclosed
2. Totally enclosed fan cooled
3. Open type
4. Semi closed
Answer: 2
19. One type of open enclosure is the
1. Open drip proof
2. TENV Enclosure
3. TEFC Enclosure
4. Explosion Proof
Answer: 1
20. TEFC stands
1. Totally Enclosed Fan Cooled
2. Totally Enclosed Fan Closed
3. Totally Ended Fan Cooled
4. Totally Ended Fan Closed
Answer: 1
21. The TEFC style enclosure is on
1. Pumps
2. Fans & Compressors
3. General industrial belt drive and direct connected equipment.
4. All of the above
Answer: 4
22. Vector control (field-oriented control) is a
1. Variable frequency drive
2. Variable voltage drive
3. Constant frequency drive
4. Constant voltage drive

Answer: 1
23. In Vector control i.e. (FOC), the ..... of a three-phase AC electric motor are identified as two orthogonal components that can be visualized with a vector
1. Stator currents
2. Stator voltage
3. Stator torque
4. Stator impedance
Answer: 1
24. In Vector control, two orthogonal components that can be visualized with a vector. One component defines the magnetic flux of the motor & the other is
1. Torque
2. Voltage
3. Current.
4. Speed
Answer: 1
25. .....is used to control AC synchronous and induction motors
1. Direct self-control
2. Space vector modulation
3. V/f (Volts per Hertz) control
4. Field-oriented control
Answer: 4
26.The AC motor behaves like a DC motor in which the field flux linkage and armature flux linkage created by the respective field and armature (or torque component) currents are..... aligned
1. Orthogonally
2. 45 degree
3. 180 degree
4. 270 degree
Answer: 1
27. Complex stator current space vector can be defined in a ..... coordinate system
1. b, d
2. x, z
3. d, q
4. i, j
Answer: 3
28. Direct axis is aligned to..... and quadrature axis is aligned to field flux linkage component of current is aligned along the d axis and torque component of current is aligned along the q axis
1. Field flux linkage, torque component of current
2. Torque component of current, Field flux linkage
3. Stator flux linkage, torque component of current
4. Speed component, torque component of current
Answer: 1
29. Clarke transformation is used to represent
1. Three to two phase (a, b, c to α, β)
2. Three to Three phase (a, b, c to a, b, c)
3. Two to two phase (α, β to α, β)

4. Two to three phase (α, β to a, b, c)
Answer: 1
30. Park transformations is used to project .....respectively.
1. Two to two phase,(d, q to α, β)
2. Three to two phase (a, b, c to α, β)
3. Two to two phase,(α, β to d, q)
4. Two to three phase (α, β to a, b, c)
Answer: 3
31. Inverse Park transformation is used to correspond .....respectively.
1. Two to two phase,(d, q to α, β)
2. Three to two phase (a, b, c to α, β)
3. Two to two phase,(α, β to d, q)
4. Two to three phase (α, β to a, b, c)
Answer: 1