

Name: \_\_\_\_\_ Hall Ticket No. 

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**Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.****I Choose the correct alternative:**

1. In single PWM, the maximum pulse width can be varied \_\_\_\_\_ [      ]  
a) 0 to 360 degrees    b) 0 to 180 degrees    c) 0 to 90 degrees    d) 0 to 60 degrees
2. The stator voltage control can be achieved by using \_\_\_\_\_ [      ]  
a) DC chopper    b) controlled rectifier    c) AC voltage controller    d) step down cyclo-converter
3. In V/f method, the maximum torque is \_\_\_\_\_ [      ]  
a) Decreases    b) increases    c) constant    d) zero
4. In a static scherbius drive, if the firing angle of the inverter is  $165^\circ$ , the value of slip is \_\_\_\_ [      ]  
a) Zero    b)  $0.5\alpha$     c)  $0.966\alpha$     d) Infinite
5. Which of the following drive is more reliable [      ]  
a) Voltage Source Inverter fed    b) Current Source Inverter fed  
c) Cyclo-converter fed    d) all the above
6. How to measure the speed of an induction motor in closed loop system [      ]  
a) Brushes    b) Wattmeter    c) Tacho-generator    d) Multimeter
7. Which device is suitable for fan control application [      ]  
a) Power transistor    b) Power Diode    c) Triac    d) Zener diode
8. A special case of plugging occurs when an induction motor connected to positive sequence voltage is driven by an active load in the reversing direction [      ]  
a) Quadrant IV    b) Quadrant III    c) Quadrant II    d) Quadrant I
9. In motoring operation, ( V/f ) ratio is increased at [      ]  
a) High frequency    b) High flux    c) Low frequency    d) Low flux
10. In general, Frequency of rotor currents = Frequency of supply voltage when [      ]  
a) Slip = 0    b) Slip = 0.5    c) Slip = 1    d) Slip = -1

**Cont.....2**

**II Fill in the blanks**

11. The Slip Power Recovery refers to control of \_\_\_\_\_ Induction motor.
12. The main drawback of stepped wave inverter is \_\_\_\_\_ in output voltage at low frequencies.
13. In static Kramer drive, motor turns ratio is 0.6,  $\alpha = 120^\circ$ . Then the motor slip is \_\_\_\_\_
14. The speed of wound rotor Induction Motor in a Static Kramer drive is controlled by \_\_\_\_\_
15. The stator to rotor turns ratio of an Induction Motor is generally \_\_\_\_\_
16. In cranes and Lifts \_\_\_\_\_ type of motor is used
17. For an induction motor  $s$  is slip,  $f_s$  is the stator frequency then rotor frequency  $f_r =$  \_\_\_\_\_
18. The speed of induction motor, whose slip is 0.4 and synchronous speed is 1000rpm is \_\_\_\_\_
19. The torque is positive but the speed is negative, so \_\_\_\_\_ torque appears as breaking torque
20. By using AC voltage controller, \_\_\_\_\_ can be fixed

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