

Sub: EM-II

Date: 10-05-2017

Time: 20Min. Roll No _____

Max Marks: 10M

Note: Answer the ALL Questions. Each Question carry ½ Marks.

1. The slip rings of an induction motor are made of
(a) Copper (b) carbon (c) phosphor bronze (d) all ()
2. The speed of rotating field due to rotor current relative to rotor surface is
(a) N_s (b) $S N_s$ (c) N (d) none ()
3. A 3-phase, 400V, 4-pole, induction motor is fed from 50Hz supply mains. It runs at a speed of 1440 rpm. The rotor current frequency is
(a) 2 Hz (b) 50 Hz (c) 48 Hz (d) 4Hz ()
4. In an induction motor, the air gap flux density is usually kept low so as to
(a) Improve efficiency (b) Improve power factor (c) reduce machine cost (d) None ()
5. If a 3-phase induction motor is running at a slip S , then the rotor cu loss= ()
(a) $(1-S)^*$ rotor input power (b) $(1+S)^*$ rotor input power (c) S^* rotor input power (d) none
6. The rotor core losses of induction motor are negligible because of ()
(a) Rotor current frequency is very high (B) rotor current frequency is very low
(C) Rotor current frequency is constant (D) None
7. The frequency of the emf in the stator of a 4-pole induction motor is 50Hz, and that in the rotor is 1.5 Hz, then the slip is, ()
(a) 0.02 (b) 0.01 (c) 0.03 (d) 0.04
8. Deep-bar rotors are used to improve ()
(a) Efficiency (b) power factor (c) starting torque (d) None
9. The torque developed in induction motor varies as ()
(a) V (b) V^2 (c) $1/V$ (d) \sqrt{V}
10. In double cage induction motor, the outer cage winding has ()
(a) High inductance (b) Low resistance (c) High resistance (d) none of the above
11. A high starting torque can be obtained in a 3-phase induction motor by
(a) Increasing the rotor resistance (b) decreasing the rotor resistance
(c) Increasing the rotor reactance (d) none ()
12. The starting current of a 3-phase induction motor is about ___ of its full load current
(a) Half (b) twice (c) 5 to 7 times (d) 15 to 20 times ()
13. In double cage induction motors, the starting torque is produced mainly by the
(a) Inner cage (b) outer cage (c) both (a)&(b) (d) None ()

14. Induction generator runs at
(a) Below-synchronous speed (b) synchronous speed currents ()
(c) Above-synchronous speed (d) low speed
15. Non uniform distribution of current in the deep bar rotors at the time of starting is due to
(a) Skin effect (b) proximity effect (c) heat effect (d) Both (a) & (b) ()
16. The speed of a squirrel cage induction motor is changed by
(a) Pole changing (b) Rheostat control (c) cascade control (d) None ()
17. star-delta starting is equivalent to auto-transformer starting with__ tapping ()
(a) 33.3% (b) 50% (c) 57.7% (d) 82%
18. Which of the following starting method cannot be used for starting a 3-phase squirrel cage induction motor?
(a) star-delta (b) Rheostat control (c) Auto transformer (d) line resistance ()
19. The speed of an induction motor depends on
(a) No of stator poles (b) Increasing supply frequency ()
(c) Input voltage to stator (d) All of the above
20. Rotor resistance speed control used for 3-phase slip ring induction motors has the draw backs of.
(a) Reduced starting torque (b) lower efficiency and poor speed regulation ()
(c) Both (a) and (b) (d) None of these.

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 (a) $(1-S) \times$ rotor input power (b) $(1+S) \times$ rotor input power (c) $S \times$ rotor input power (d) none.

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