

QUIZ – ANSWER KEY

QUIZ NO: 116

TOPIC: ELECTRICAL ENGINEERING

DATE: 20/10/2022

1. Starting current of a straight type repulsion motor is about _____ its full load value ?

- [A] 3 to 4 times
- [B] Half
- [C] The same as
- [D] 7 to 10 times

Answer: A

2. Which of the following motors is operated either on direct or single-phase AC supply and produces approximately the same speed and output?

- [A] Universal motor
- [B] Capacitor start and capacitor run induction motor
- [C] Capacitor start induction run motor
- [D] 1-phase series motor

Answer: A

3. A two-value capacitor-run motor starts with a _____ capacitor and runs with a _____ capacitor ?

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- [A] High; High
- [B] Low; High
- [C] Low; Low
- [D] High; Low

Answer: D

4. The main and auxiliary winding impedance of a 50-Hz, capacitor-start single-phase induction motor is $Z_m = (3 + j3) \Omega$ and $Z_a = (7 + j3) \Omega$. Determine the value of the capacitor to be connected in series with the auxiliary winding to achieve a phase difference of 90° between the currents of the two windings at the start ?

- [A] 225 μF
- [B] 22.5 μF
- [C] 318 μF
- [D] 31.8 μF

Answer: C

5. Reluctance motor is basically a ?

- [A] DC shunt motor
- [B] Servo motor
- [C] DC series motor
- [D] Single-phase synchronous motor

Answer: D

6. In a single-phase, resistance split-phase motor, the phase difference between the currents in the auxiliary winding and the main winding is approximately _____ ?

- [A] 60° mechanical

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[B] 30° electrical

[C] 60° electrical

[D] 30° mechanical

Answer: B

7. Which of the following machines has high power factor and efficiency under running conditions?

[A] Capacitor-start single-phase induction motor

[B] Two-value capacitor single-phase induction motor

[C] Resistance split-phase single-phase induction motor

[D] Shaded-pole single-phase induction motor

Answer: B

8. The starting winding of a single-phase motor is placed in _____ ?

[A] Rotor

[B] Stator

[C] Armature

[D] Field

Answer: B

9. A 220-V, 50-Hz, 6-pole, single-phase induction motor runs with 3% slip. Determine the rotor speed ?

[A] 1455 rpm

[B] 728 rpm

[C] 970 rpm

[D] 960 rpm

Answer: C

10. The rotor of a hysteresis motor is made of ceramic permanent magnet material, which causes ?

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- [A] No hysteresis losses
- [B] Stationary flux
- [C] No eddy current losses
- [D] High eddy current losses

Answer: C



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