QUIZ – ANSWER KEY

QUIZ NO: 124

TOPIC: ELECTRICAL ENGINEERING

DATE: 18/11/2022

1. An induction motor can be said analogous to ____ ?

   [A] transformer

   [B] synchronous motor

   [C] universal motor

   [D] stepper motor

   Answer: A

2. A 3-phase induction motor with its rotor blocked behaves similar to a_____?

   [A] transformer under short circuit of secondary terminals

   [B] transformer under open circuit of secondary

   [C] synchronous motor under slip test

   [D] synchronous motor under open circuit

   Answer: A

3. No load current in induction motor is 10-20% of full load current and the no load current of transformer is 2-6% ?

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[A] True

[B] False

Answer: A

4. The rated current in induction motor for a three phase system is 100A. What can be the no load estimated current for the machine?

[A] 12 A

[B] 20 A

[C] 30 A

[D] 5 A

Answer: A

Explanation: No load current in induction motor is 10-20% of full load current.

5. The no load current of the transformer is very less due to_____ ?

[A] mutual flux having low reluctance iron core

[B] mutual flux having high reluctance iron core

[C] leakage flux having low reluctance iron core

[D] leakage flux having high reluctance iron core

Answer: A

6. The no load current of the induction motor is high due to _____?

[A] long and high reluctance path between stator and rotor

[B] mutual flux having moderate reluctance path between stator and rotor

[C] leakage flux having low reluctance iron core

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[D] leakage flux having high reluctance iron core

Answer: A

7. At no load induction motor has possible power factor as___?

[A] 0.2
[B] 0.5
[C] 0.65
[D] 0

Answer: A

Explanation: At no load the lower power factor is low and lagging in nature.

8. Mechanically air gaps in induction motor are kept very low to avoid_____ ?

[A] lower power factor
[B] lagging nature
[C] magnetizing current
[D] all of the mentioned

Answer: D

Explanation: Air gap is kept lower to avoid the low value power factor, lagging behaviour and to reduce the magnetizing current.

9. (I) Even at no load a large 3-phase squirrel- cage induction motor is started at reduced voltage than rated.
(II) If a large 3–phase squirrel-cage induction motor with no load is started at full voltage, it will be damaged

[A] I is true, II is false
[B] I is true and II is also true
[C] I is false, II is true
[D] I and II are false

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Answer: A

Explanation: Large current of short duration are not harmful to induction motor but it may cause voltage drop in the power supply.

10. The rotor of 3-phase slip ring induction motor is fed from a 3-phase supply with its stator winding short circuited having rotor rotating clockwise at a speed of Nr, then the _____?

[A] speed of air gap field w.r.t. stator is Ns-Nr anticlockwise
[B] speed of air gap field w.r.t. stator is Ns-Nr clockwise
[C] speed of airgap field w.r.t rotor is Ns clockwise
[D] speed of airgap field w.r.t. stator is Ns-Nr clockwise

Answer: A
Explanation: The air gap field of stator = -(Ns-Nr).