

QUIZ – ANSWER KEY

QUIZ NO: 82

TOPIC: ELECTRICAL ENGINEERING

DATE: 16/06/2022

1. A 25 KVA transformer is constructed to a turns ratio of $N_1/N_2 = 10$. The impedance of primary winding is $3+j5$ ohms and of secondary winding is $0.5+j0.8$ ohms. What will be the impedance of transformer when referred to primary?

- [A] $53 + 85j$ ohms
- [B] $53j + 85$ ohms
- [C] Can't be calculated
- [D] $3.5 + 5.8j$ ohms

Answer: A

2. The full-load copper loss of a transformer is 1600 W. At half-load, the copper loss will be _____

- [A] 1600 W
- [B] 6400 W
- [C] 400 W
- [D] 800 W

Answer: C

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3. Power transformers other than distribution transformers are generally designed to have maximum efficiency around _____

- [A] 10% overload
- [B] Near full-load
- [C] Half-load
- [D] No-load

Answer: B

4. For a power transformer operating at full load it draws voltage and current equal to 200 V and 100 A respectively at 0.8 pf. Iron and copper losses are equal to 120 kW and 300kW. What is efficiency?

- [A] 97.44%
- [B] 99.12%
- [C] 86.44%
- [D] 96.44%

Answer: A

5. No-load current in the transformer is _____

- [A] Sinusoidal distorted
- [B] Sinusoidal
- [C] Steps
- [D] Straight DC

Answer: A

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6. Which of the following is the main advantage of an auto-transformer over a two-winding transformer?
- [A] Eddy losses are totally eliminated
 - [B] Copper losses are negligible
 - [C] Saving in winding material
 - [D] Hysteresis losses are reduced

Answer: C

7. For a 20kVA transformer with a turn ratio of 0.4 what amount of total power is transferred inductively?
- [A] 10kVA
 - [B] 8kVA
 - [C] 50kVA
 - [D] 12kVA

Answer: D

8. Which of the following is the major requirement for the transformers used for electronic purposes?
- [A] Constant amplitude voltage gain
 - [B] Perfect DC isolation, maximum efficiency and constant voltage gain
 - [C] Perfect DC isolation
 - [D] Maximum efficiency

Answer: A

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9. Which type of winding is used in 3-phase shell-type transformer?

- [A] Cylindrical type
- [B] Circular type
- [C] Rectangular type
- [D] Sandwich type

Answer: D

10. Why shell type 3-phase transformer is used in large power transforming applications?

- [A] Due to other reasons
- [B] More height and less height flexibility
- [C] Can be made with less height
- [D] Can be made with more height

Answer: C

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