QUIZ – ANSWER KEY

QUIZ NO: 83

TOPIC: ELECTRICAL ENGINEERING

DATE: 21/06/2022

1. The secondary of a current transformer is always kept short-circuited while operating because it _____

    [A] Avoids core saturation and high voltage induction

    [B] Is safe to human beings

    [C] Protects the primary circuit

    [D] To keep temperature within limits

    Answer: A

2. For a transformer with primary turns 400, secondary turns 100, if 20A current is flowing through primary, we will get _____

    [A] 800A at secondary

    [B] 40A at secondary

    [C] 80A at secondary

    [D] 5A at secondary

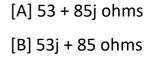   **Answer: C**

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3. A 25 KVA transformer is constructed to a turns ratio of N1/N2 = 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

4. 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

5. 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

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6. 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

7. No-load current in the transformer is _____
   [A] Sinusoidal distorted
   [B] Sinusoidal
   [C] Steps
   [D] Straight DC

   Answer: A

8. 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

9. 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

10. 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