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Started on Tuesday, 5 March 2024, 12:48 AM

State Finished

Completed on Tuesday, 5 March 2024, 12:48 AM

Time taken 11 secs

Marks 0.00/21.00

Grade 0.00 out of 10.00 (0%)

Question **1**

Not answered

Marked out of 1.00

The core flux in a double wound transformer cuts the -

- a. b) secondary winding only
- b. c) primary winding on one half cycle and the secondary winding on the other half cycle
- c. d) primary and secondary windings simultaneously
- d. a) primary winding only

Your answer is incorrect.

The correct answer is:

- d) primary and secondary windings simultaneously

Question **2**

Not answered

Marked out of 1.00

The secondary voltage of a transformer is produced by -

- a. d) self induction
- b. b) current conduction
- c. c) mutual induction
- d. a) electrostatic induction

Your answer is incorrect.

The correct answer is:

- c) mutual induction

Question **3**

Not answered

Marked out of 1.00

The number of primary winding turns on a transformer is determined by the -

- a. c) impedance of the secondary load
- b. b) primary current and voltage
- c. d) frequency of the supply only
- d. a) supply frequency, voltage and core flux

Your answer is incorrect.

The correct answer is:

- a) supply frequency, voltage and core flux

Question **4**

Not answered

Marked out of 1.00

If a double wound transformer having a voltage ratio of 2:1 is supplied with a 50Hz sine wave to the primary winding, the frequency of the secondary output will be -

- a. a) 25Hz sine wave
- b. d) 50Hz distorted wave
- c. c) 50Hz sine wave
- d. b) 25Hz distorted wave

Your answer is incorrect.

The correct answer is:

d) 50Hz distorted wave

Question **5**

Not answered

Marked out of 1.00

The number of primary turns on a transformer is governed by the -

- a. a) secondary current
- b. d) required ratio of transformation
- c. c) primary voltage
- d. b) primary current

Your answer is incorrect.

The correct answer is:

c) primary voltage

Question **6**

Not answered

Marked out of 1.00

The primary winding of a 440/55V transformer has 400 turns. How many turns are there on the secondary winding?

- a. 200
- b. 50
- c. 100
- d. 150

Your answer is incorrect.

The correct answer is:

50

Question **7**

Not answered

Marked out of 1.00

1. A single phase 240/32V transformer has 300 primary turns and takes a primary current of 1A. Determine the -

- a) secondary turns
- b) secondary current

- a. (80 turns) (15A)
- b. (40 turns) (7.5A)
- c. (140 turns) (17.5A)

Your answer is incorrect.

The correct answer is:

(40 turns) (7.5A)

Question **8**

Not answered

Marked out of 1.00

1. A transformer with a core flux of 25mWb has a primary winding of 1000 turns and a secondary of 1500 turns. Calculate the secondary voltage if the supply frequency is 50Hz.

- a. 8325V
- b. 6000
- c. 7000

Your answer is incorrect.

The correct answer is:

8325V

Question **9**

Not answered

Marked out of 1.00

1. The core of a transformer is laminated to -

- a. b) reduce eddy current loss
- b. d) make core construction simpler
- c. c) enhance the coupling between windings
- d. a) reduce hysteresis loss
b) reduce eddy current loss
c) enhance the coupling between windings
d) make core construction simpler

Your answer is incorrect.

The correct answer is:

b) reduce eddy current loss

Question **10**

Not answered

Marked out of 1.00

1. Silicon steel is used for transformer cores because it -

- a. b) keeps the iron loss to a minimum
- b. d) has low resistance
- c. a) reduces hysteresis loss
- d. c) is cheaper than ordinary steel

Your answer is incorrect.

The correct answer is:

- a) reduces hysteresis loss

Question **11**

Not answered

Marked out of 1.00

1. The material most commonly used for transformer windings is -

- a. a) aluminium
- b. b) copper
- c. d) iron
- d. c) silicon steel

Your answer is incorrect.

The correct answer is:

- b) copper

Question **12**

Not answered

Marked out of 1.00

1. In general the power factor of the primary side of a transformer with an inductive secondary load is -

- a.
- c) higher than
- b. b) equal to
- c. d) unrelated to the power factor of the secondary winding.
- d. a) lower than

Your answer is incorrect.

The correct answer is:

d) unrelated to the power factor of the secondary winding.

Question **13**

Not answered

Marked out of 1.00

1. The primary and secondary currents of a transformer are "**approximately**" -

- a. c) 90° out of phase
- b. a) in phase
- c. d) 180° out of phase
- d.
- b) 60° out of phase

Your answer is incorrect.

The correct answer is:

d) 180° out of phase

Question **14**

Not answered

Marked out of 1.00

1. The no-load power factor of a transformer is approximately -

- a. a) 0.1
- b. d) 0.707
- c.
- b) 1.0
- d. c) 0.9

Your answer is incorrect.

The correct answer is:

a) 0.1

Question **15**

Not answered

Marked out of 1.00

1. A single phase 240/32V transformer is to supply a low voltage lighting circuit. The no-load current of the transformer is 2A at a power factor of 0.1 lag. If the lights takes a current of 40A at unity power factor, determine the -

- a) primary current
- b) primary phase angle
- primary power factor.

- a. (5.9A) (40° lag) (0.94)
- b. (5.9A) (20° lag) (0.94)
- c. (7A) (20° lag) (0.94)

Your answer is incorrect.

The correct answer is:

(5.9A) (20° lag) (0.94)

Question **16**

Not answered

Marked out of 1.00

1. The all day efficiency of a transformer is the ratio of the -

- a.
- a) output energy over 24 hours to the input energy over 24 hours
 - d) output energy over 24 hours to the input energy over 24 hours
- b. c) input kVA over 24 hours to the output kVA over 24 hours
- c. a) input energy over 24 hours to the output energy over 24 hours
- d.
- b) output kVA over 24 hours to the input kVA over 24 hours

Your answer is incorrect.

The correct answer is:

- a) output energy over 24 hours to the input energy over 24 hours
- d) output energy over 24 hours to the input energy over 24 hours

Question **17**

Not answered

Marked out of 1.00

1. A 33kV/11kV, three phase transformer with a rating of 500kVA has a percentage impedance of 4.5%. Determine the secondary prospective short circuit current of the transformer.

- a. 1000
- b. 583A
- c. 1500

Your answer is incorrect.

The correct answer is:

583A

Question **18**

Not answered

Marked out of 1.00

1. A 50kVA transformer has a full load copper loss of 460W and an iron loss of 220W. Determine the -

- a) iron loss when delivering 25kVA
- b) copper loss when delivering 25kVA.

- a. (220W) (115W)
- b. (220W) (230W)
- c. 220W) (460W)

Your answer is incorrect.

The correct answer is:

(220W) (115W)

Question **19**

Not answered

Marked out of 1.00

1. When conducting a final additive/subtractive polarity test for paralleling two single phase transformers, the voltmeter is connected across -

- a. a) each transformer primary winding
- b. a) the two transformer primaries in parallel
- d) the two transformer primaries in para
- c. c) the two transformer secondaries in series
- d. b) each transformer secondary winding

Your answer is incorrect.

The correct answer is:

c) the two transformer secondaries in series

Question **20**

Not answered

Marked out of 1.00

In an auto transformer the current in the primary is 10 amperes and the current in the secondary is 20 amperes; the current in the common part of the winding is—

- a. .
- b. c) 15 amperes
- c. b) 20 amperes.
- d. a) 30 amperes.

Your answer is incorrect.

The correct answer is:

- d) 10 amperes.

Question **21**

Not answered

Marked out of 1.00

1. An auto transformer is used to step up from 200 volts to 250 volts. The primary winding consists of 400 turns and the secondary current is 20 amperes. Determine:

- a) secondary turns
- b) primary current
- c) current in common portion of winding, neglecting all losses

- a. (500 turns) (25A) (5A).
- b. (1000 turns) (50A) (15A).
- c. (250 turns) (20A) (10A).

Your answer is incorrect.

The correct answer is:
(500 turns) (25A) (5A).

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