MANITOBA PHYSICS 40S · UNIT C · 25 QUESTIONS

Electricity — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A transformer has a primary voltage of 12 volts and a secondary to primary turns ratio of 2 to 1. The secondary voltage, in volts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A coil of 30 turns has its magnetic flux change by 3 webers in 2 seconds. The induced voltage, in volts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A current of 2 amperes flows through a resistor of 3 ohms. The voltage, in volts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A voltage of 36 volts is applied across a resistor of 4 ohms. The current, in amperes, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A voltage of 12 volts drives a current of 2 amperes. The resistance, in ohms, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Resistors of 5 ohms, 3 ohms, and 7 ohms are connected in series. The total resistance, in ohms, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **Two equal resistors of 12 ohms are connected in parallel. The total resistance, in ohms, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **A device runs at 5 volts with a current of 6 amperes. The power, in watts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A current of 4 amperes flows through a resistor of 2 ohms. The power dissipated, in watts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A device uses 70 watts for 3 seconds. The energy used, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **A transformer has a primary voltage of 36 volts and a secondary to primary turns ratio of 4 to 1. The secondary voltage, in volts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **A coil of 30 turns has its magnetic flux change by 5 webers in 2 seconds. The induced voltage, in volts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A current of 6 amperes flows through a resistor of 4 ohms. The voltage, in volts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **A voltage of 36 volts drives a current of 4 amperes. The resistance, in ohms, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **Resistors of 3 ohms, 5 ohms, and 6 ohms are connected in series. The total resistance, in ohms, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A fuse or breaker protects a circuit by**

A increasing the voltage

B storing charge

C breaking the circuit when the current is too large

D cooling the wires

Understand It with Pulse | Flag a mistake

17 **Electromagnetic induction is a current produced by a**

A steady magnetic field

B steady electric field

C battery alone

D changing magnetic field

Understand It with Pulse | Flag a mistake

18

A generator converts

A mechanical energy to electrical energy

B electrical energy to mechanical energy

C heat to light

D chemical energy to heat

Understand It with Pulse | Flag a mistake

19

An electric motor converts

A mechanical energy to electrical energy

B electrical energy to mechanical energy

C heat to light

D light to motion

Understand It with Pulse | Flag a mistake

20

A transformer works only with

A direct current

B batteries

C alternating current

D static charge

Understand It with Pulse | Flag a mistake

21

An ideal step up transformer

A decreases voltage and increases current

B increases both

C decreases both

D increases voltage and decreases current

Understand It with Pulse | Flag a mistake

22 **An ideal step down transformer**

A decreases voltage and increases current

B increases voltage and decreases current

C decreases both

D increases both

Understand It with Pulse | Flag a mistake

23 **Lenz law says an induced current opposes the**

A battery voltage

B change that produced it

C resistance

D wire length

Understand It with Pulse | Flag a mistake

24

Increasing the rate of change of magnetic flux

A decreases the induced voltage

B does not change it

C increases the induced voltage

D reverses the battery

Understand It with Pulse | Flag a mistake

25

Increasing the number of turns in a coil

A decreases the induced voltage

B does not change it

C shorts the coil

D increases the induced voltage

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	24	**10.**	210	**19.**	B
2.	45	**11.**	144	**20.**	C
3.	6	**12.**	75	**21.**	D
4.	9	**13.**	24	**22.**	A
5.	6	**14.**	9	**23.**	B
6.	15	**15.**	14	**24.**	C
7.	6	**16.**	C	**25.**	D
8.	30	**17.**	D		
9.	32	**18.**	A		

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