PRINCE EDWARD ISLAND PHYSICS 12 · UNIT C

Electricity and Magnetism — Practice Test

Prince Edward Island Physics 12 • 25 questions

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 charge of 2 coulombs in an electric field of 10 newtons per coulomb experiences force in newtons of**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A current of 3 amperes through a resistance of 4 ohms gives voltage in volts of**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A 12 volt battery connected to a 6 ohm resistor gives current in amperes of**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A device uses 120 volts and 2 amperes. Its power in watts is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A charge of 4 coulombs moves at 5 metres per second perpendicular to a magnetic field of 2 tesla. The magnetic force in newtons is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A current of 5 amperes flows for 10 seconds. The charge transferred in coulombs is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7

Electric field lines point away from

A positive charges

B negative charges

C neutral objects

D magnets only

Understand It with Pulse | Flag a mistake

8

Electric field lines point toward

A positive charges

B neutral objects

C north poles

D negative charges

Understand It with Pulse | Flag a mistake

9 **Ohm law relates voltage, current and**

A charge

B capacitance

C resistance

D power

Understand It with Pulse | Flag a mistake

10 **In a series circuit, current is**

A largest at the battery

B the same everywhere

C divided equally

D zero

Understand It with Pulse | Flag a mistake

11 **In a parallel circuit, voltage across each branch is**

A the same

B divided equally

C zero

D largest in the first branch

Understand It with Pulse | Flag a mistake

12 **A magnetic field is produced by**

A stationary charges only

B insulators only

C gravity

D moving charges and magnets

Understand It with Pulse | Flag a mistake

13 **The magnetic force on a moving charge is greatest when motion is**

A stationary

B along the field lines

C perpendicular to the field

D parallel to the field

Understand It with Pulse | Flag a mistake

14 **Electromagnetic induction occurs when magnetic flux through a loop**

A is parallel only

B changes

C is constant

D is zero always

Understand It with Pulse | Flag a mistake

15

A transformer works with

A alternating current

B direct current only

C static charge only

D batteries only

Understand It with Pulse | Flag a mistake

16

Like magnetic poles

A attract

B cancel

C have no force

D repel

Understand It with Pulse | Flag a mistake

17 **A resistor of 10 ohms with 5 volts across it carries current in amperes as a decimal of**

ANSWER

Understand It with Pulse | Flag a mistake

18 **Two 6 ohm resistors in series have total resistance in ohms of**

ANSWER

Understand It with Pulse | Flag a mistake

19 **A 100 watt bulb used for 2 hours uses energy in watt hours of**

ANSWER

Understand It with Pulse | Flag a mistake

20 **A charge of 10 coulombs in an electric field of 3 newtons per coulomb experiences force in newtons of**

ANSWER

Understand It with Pulse | Flag a mistake

21 **A current of 8 amperes through a resistance of 3 ohms gives voltage in volts of**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A device uses 240 volts and 3 amperes. Its power in watts is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A charge of 5 coulombs moves at 2 metres per second perpendicular to a magnetic field of 3 tesla. The magnetic force in newtons is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **A current of 10 amperes flows for 6 seconds. The charge transferred in coulombs is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **Three 2 ohm resistors in series have total resistance in ohms of**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 20
2. 12
3. 2
4. 240
5. 40
6. 50
7. A
8. D
9. C
10. B
11. A
12. D
13. C
14. B
15. A
16. D
17. 0.5
18. 12
19. 200
20. 30
21. 24
22. 720
23. 30
24. 60
25. 6

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