NOVA SCOTIA ADVANCED PHYSICS 12 · UNIT D

Fields, Circuits and Electromagnetism — Practice Test

Nova Scotia Advanced Physics 12 • 10 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 15 volt battery drives a current of 3 amperes through a circuit. The total resistance, in ohms, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A current of 4 amperes flows through a resistor of 5 ohms. The power dissipated, in watts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A current of 1 amperes flows through a resistor of 20 ohms. The power dissipated, in watts, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A transformer has 1000 primary turns and 500 secondary turns. A primary voltage of 120 volts gives a secondary voltage, in volts, of**

ANSWER

Understand It with Pulse | Flag a mistake

5 **A transformer has 400 primary turns and 200 secondary turns. A primary voltage of 80 volts gives a secondary voltage, in volts, of**

ANSWER

Understand It with Pulse | Flag a mistake

6 **A coil of 100 turns experiences a flux change of 0.5 webers in 5 seconds. The induced emf, in volts, is**

ANSWER

Understand It with Pulse | Flag a mistake

7 **A coil of 10 turns experiences a flux change of 1.0 webers in 2 seconds. The induced emf, in volts, is**

ANSWER

Understand It with Pulse | Flag a mistake

8 **The force on a moving charge in a magnetic field is greatest when the charge moves**

A perpendicular to the field

B parallel to the field

C at rest

D along the field

Understand It with Pulse | Flag a mistake

9 **Faraday's law states that induced emf is proportional to the rate of change of**

A current

B magnetic flux

C resistance

D charge

Understand It with Pulse | Flag a mistake

10 **A resistor and a capacitor are connected in series to a battery. Which of the following is the same for the resistor and the capacitor?**

A The current through each

B The voltage across each

C The charge on each

D The power in each

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	5	**5.**	40	**9.**	B
2.	80	**6.**	10	**10.**	C
3.	20	**7.**	5		
4.	60	**8.**	A		

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