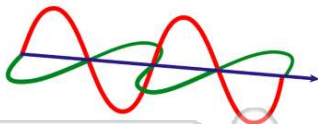




Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

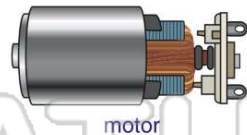
1 In which part of the electromagnetic spectrum does a **photon** have the **greatest energy**?

A red  
B infrared  
C violet  
D ultraviolet



2 An operating **electric motor** has a **back electromotive force** because, in addition to acting as a motor, it acts as

A a split-ring commutator  
B a transformer  
C an induction coil  
D a generator



3 A torque exists on the armature of an operating electric motor. The **magnitude of this torque would decrease** if there were an **increase** in the

A current in the armature coil  
B magnetic field strength of the field magnet  
C potential difference applied to the armature

4 As the armature of an operating electric motor turns, a **voltage is induced**. This voltage is **opposite in direction** to the **applied voltage** and referred to as

A conduction  
B reverse current

5



**PREVIEW**

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6

A thickness decreases  
B temperature increases  
C thickness increases  
D thickness decreases



7

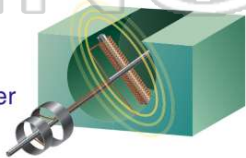
A  $1.0 \times 10^{-6} \text{ N}$   
B  $6.4 \times 10^{-13} \text{ N}$   
C  $3.6 \times 10^{-24} \text{ N}$   
D  $4.0 \times 10^6 \text{ N}$

9 The **Millikan oil drop experiment** determined the **smallest unit of**

A mass  
B weight  
C electric charge  
D electric field strength

10 Which device **transforms mechanical energy** into **electrical energy**?

A generator  
B motor  
C transformer  
D mass spectrometer

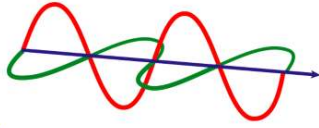




## ANSWER KEY

In which part of the electromagnetic spectrum does a **photon** have the **greatest energy**?

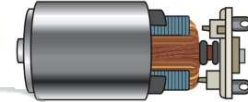
- A red
- B infrared
- C violet
- D ultraviolet



(d)

An operating **electric motor** has a **back electromotive force** because, in addition to acting as a motor, it acts as

- A a split-ring commutator
- B a transformer
- C an induction coil
- D a generator



motor

(d)

A torque exists on the armature of an operating electric motor. The **magnitude of this torque would decrease** if there were an **increase** in the

- A current in the armature coil
- B magnetic field strength of the field magnet
- C potential difference applied to the armature coil
- D thickness of the armature coil

(d)

As the armature of an operating electric motor turns, a **voltage is induced**. This voltage is **opposite in direction** to the **applied voltage** and referred to as

- A conduction
- B reverse current
- C magnetic levitation
- D induced current

(d)



## PREVIEW

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D thickness increases



B  $6.4 \times 10^{-13}$  N

C  $3.6 \times 10^{-24}$  N

D  $4.0 \times 10^6$  N

The **Millikan oil drop experiment** determined the **smallest unit of**

- A mass
- B weight
- C electric charge
- D electric field strength

(c)

Which device **transforms mechanical energy** into **electrical energy**?

- A generator
- B motor
- C transformer
- D mass spectrometer

(a)

