

**SCIENCE**

# نماذج اختبارات الأضواء

لشهر نوفمبر

الفصل الدراسي الأول  
**1**  
الإعدادي

**1- A) Choose the correct answer:**

- A negative charge is produced on a rod of ..... when rubbed with a piece of silk.
- a) glass                      b) ebonite                      c) copper                      d) wood

**B) 1- Give a reason for each of the following:**

- 1 The bond in a hydrogen chloride molecule is a single covalent bond.  
.....
- 2 The attraction of paper pieces to an ebonite rod after rubbing it with a piece of wool.  
.....

**2- What is the importance of ...?**

- Metal chains in fuel vehicles.  
.....

**2- A) Put (✓) or (X):**

- Magnetic field lines around a magnet can be seen. ( )

**B) Give one example of:**

- 1 A molecule containing a triple covalent bond.
- 2 A contact force.

**3- A) Complete the following sentence:**

- The magnetic field lines start from the ..... pole and end at the ..... pole.

**B) What happens if ?**

- 1 A magnet is freely suspended from its middle.  
.....
- 2 A positively charged glass rod is brought near an electroscope disc charged with a negative charge.  
.....

1- A) Complete the following sentence:

- A ..... results in compound or element molecules.

B) What is the importance of ....?

- 1 Electrostatic plating.

.....

- 2 Spring balance.

.....

- 3 Tides.

.....

2- A) Put (✓) or (X):

- The strength of Earth's gravitational field increases as we move away from its center. ( )

B) Answer the following questions:

- 1 A body of mass 500 g on Earth. Calculate its weight if the gravitational field strength = 10 N/kg.

.....

- 2 Figure (1) represents an atom, while figure (2) represents an ion. Explain why.

.....  
 .....  
 .....  
 .....

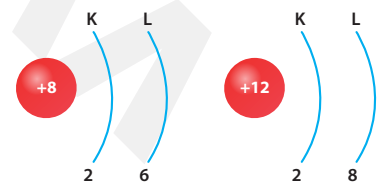


Figure 1

Figure 2

3- A) Write the scientific term:

- The electric charges accumulated on the surfaces of the objects when they lose or gain electrons. (.....)

B) Look at the opposite figure, then answer:



- 1 The opposite figure represents the .....
- 2 This device is used to .....

1- A) Complete the following sentence:

- ..... causes the falling of rain down to the Earth's surface.

B) 1- What is meant ...?

- 1 Covalent bond.
- .....

- 2 Law of attraction and repulsion.
- .....

2- Answer the following problem:

- Calculate the mass of a body of weight 40 N on Earth, if the gravitational field strength = 10 N/kg.
- .....

2- A) Put (✓) or (X):

- Black holes are formed as a result of the collapse of a massive planet at the end of its life. ( )

B) Give a reason for:

- 1 Aluminum and silver are non-magnetic materials.
- .....

- 2 The weight of a body changes from one planet to another.
- .....

3- A) Choose the correct answer:

- The ionic bond forms between magnesium ( $_{12}\text{Mg}$ ) and ..... atoms.

a)  $_{8}\text{O}$

b)  $_{10}\text{Ne}$

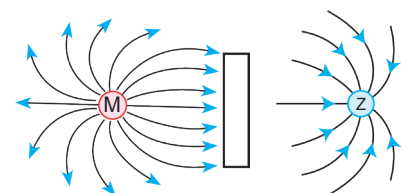
c)  $_{11}\text{Na}$

d)  $_{20}\text{Ca}$

B) Answer the following questions:

- 1 The type of charge (Z) is a ..... charge.

- 2 The type of charge (M) is a ..... charge.



### 1- A) Complete the following sentence:

- The melting point of ionic compounds is ..... than that of covalent compounds.

### B) 1- What happens when ...?

- 1 A magnet is divided into several pieces.
- .....

- 2 A body moves away from the Earth's surface (regarding its weight and mass).
- .....

### 2- Define:

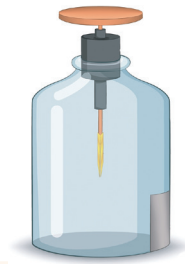
- Positive ion.
- .....

### 2- A) Put (✓) or (X):

- The density of iron filings is greatest at the middle of the magnet. ( )

### B) Look at the opposite figure, then answer:

- 1 The opposite figure is the .....
  - 2 Write the function of this device.
- .....
- .....



### 3- A) Choose the correct answer:

- A body weighs 30 N on the Moon. Its weight on Earth would be ..... .
- a) 180 N                      b) 5 N                      c) 300 N                      d) 200 N

### B) The opposite figure represents the mutual gravitational force between two spherical bodies of the same material. "Arrows indicate the direction of force":

- 1 Arrange the gravitational forces from smallest to largest.
- .....
- .....



Figure 1



Figure 2

- 2 Mention factors affecting gravitational force between two bodies.
- .....
- .....

**1- A) Choose the correct answer:**

- The number of ..... changes when an atom turns into an ion.
  - a) protons
  - b) electrons
  - c) neutrons
  - d) nucleotides

**B) 1- What happens when ... ?**

**1** A magnet is dipped into iron filings.

.....

**2** The Moon is in the new moon or full moon phase.

.....

**2- Compare between gravitational force and frictional force "in terms of the type of force" :**

Gravitational force	Frictional force

**2- A) Put (✓) or (X):**

- Nonmetal atoms tend to gain one or more electrons during a chemical reaction and become positive ions. ( )

**B) Answer the following questions:**

**1** Mention the properties of ionic compounds.

.....

.....

.....

**2** What is meant by electrostatic series?

.....

.....

.....

**3- A) Write the scientific term:**

- They are materials that are not attracted to the magnet. (.....)

**B) Give a reason for each of the following:**

**1** Occurrence of orbital motion of the moon around the Earth.

.....

**2** The magnetic needle of the compass is placed inside a copper box.

.....

**SCIENCE**

# إجابات نماذج اختبارات الأضواء

لشهر نوفمبر

المعلم الدراسي الأول  
الصف  
**1**  
الإعدادي

**1- A) Choose the correct answer:**

- A negative charge is produced on a rod of ..... when rubbed with a piece of silk.
  - glass
  - ebonite
  - copper
  - wood

**B) 1- Give a reason for each of the following:**

- The bond in a hydrogen chloride molecule is a single covalent bond.
  - Because it is formed due to sharing an unpaired valence electron from chlorine atom with an unpaired valence electron from hydrogen atom.
- The attraction of paper pieces to an ebonite rod after rubbing it with a piece of wool.
  - Due to the formation of static electric charges on the ebonite rod.

**2- What is the importance of ...?**

- Metal chains in fuel vehicles.
  - They discharge the electric charges generated by the friction of the fuel with the surface of the fuel tank to prevent fuel combustion.

**2- A) Put (✓) or (X):**

- Magnetic field lines around a magnet can be seen. (X)

**B) Give one example of:**

- A molecule containing a triple covalent bond. Nitrogen molecule ( $N_2$ )
- A contact force. Frictional force

**3- A) Complete the following sentence:**

- The magnetic field lines start from the north pole and end at the south pole.

**B) What happens if ?**

- A magnet is freely suspended from its middle.
  - It always takes a certain direction the (north-south pole).
- A positively charged glass rod is brought near an electroscope disc charged with a negative charge.
  - The gold leaves divergence decreases.

### 1- A) Complete the following sentence:

- A **covalent bond** results in compound or element molecules.

### B) What is the importance of ....?

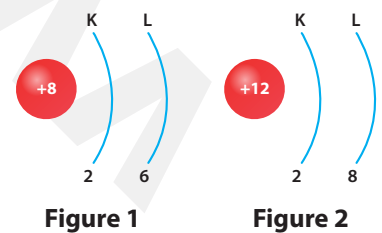
- 1 Electrostatic plating.
  - It is used in the metal coating.
- 2 Spring balance.
  - It is used to measure the weight of a body.
- 3 Tides.
  - They are used to generate the electricity.

### 2- A) Put (✓) or (X):

- The strength of Earth's gravitational field increases as we move away from its center. (X)

### B) Answer the following questions:

- 1 A body of mass 500 g on Earth. Calculate its weight if the gravitational field strength = 10 N/kg.
  - $W = m \times g = 0.5 \times 10 = 5 \text{ N}$ .
- 2 Figure (1) represents an atom, while figure (2) represents an ion. Explain why.
  - Figure 1 is an atom because the number of negative electrons equal to the number of positive protons, so it is electrically neutral, while Figure 2 is an ion because it lost two electrons so the number of +ve proton is more than -ve electrons.



### 3- A) Write the scientific term:

- The electric charges accumulated on the surfaces of the objects when they lose or gain electrons. (Static electricity)

### B) Look at the opposite figure, then answer:

- 1 The opposite figure represents the **compass**.
- 2 This device is used to **determine the main geographical directions of the Earth**.



### 1- A) Complete the following sentence:

- **Gravitational force** causes the falling of rain down to the Earth's surface.

### B) 1- What is meant ...?

1 Covalent bond.

- It is a bond formed between two atoms of the same nonmetal element or two different nonmetal elements through sharing electrons.

2 Law of attraction and repulsion.

- Like magnetic poles repel each other, while unlike magnetic poles attract each other.

### 2- Answer the following problem:

- Calculate the mass of a body of weight 40 N on Earth, if the gravitational field strength = 10 N/kg.
  - $Mass = W / g = 40 / 10 = 4 \text{ kg}$ .

### 2- A) Put (✓) or (X):

- Black holes are formed as a result of the collapse of a massive planet at the end of its life. (X)

### B) Give a reason for:

- 1 Aluminum and silver are non-magnetic materials.
  - Because they are not attracted to the magnet.
- 2 The weight of a body changes from one planet to another.
  - Because the gravitational field strength differs from one planet to another.

### 3- A) Choose the correct answer:

- The ionic bond forms between magnesium ( $_{12}\text{Mg}$ ) and ..... atoms.

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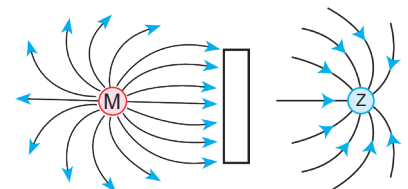
b)  $_{10}\text{Ne}$

c)  $_{11}\text{Na}$

d)  $_{20}\text{Ca}$

### B) Answer the following questions:

- 1 The type of charge (Z) is a **negative** charge.
- 2 The type of charge (M) is a **positive** charge.



### 1- A) Complete the following sentence:

- The melting point of ionic compounds is **higher** than that of covalent compounds.

### B) 1- What happens when ...?

- 1 A magnet is divided into several pieces.
  - Each piece becomes a new magnet with two poles (North and South).
- 2 A body moves away from the Earth's surface (regarding its weight and mass).
  - The weight will decrease, while the mass remains constant.

### 2- Define:

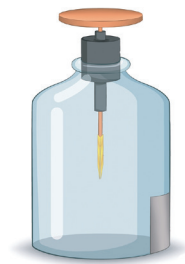
- Positive ion.
  - It is a metallic atom that loses one or more electrons during a chemical reaction.

### 2- A) Put (✓) or (X):

- The density of iron filings is greatest at the middle of the magnet. (X)

### B) Look at the opposite figure, then answer:

- 1 The opposite figure is the **electroscope**.
- 2 Write the function of this device.
  - a) Detecting the electrical state of an object.
  - b) Determining the type of charge of a charged object.

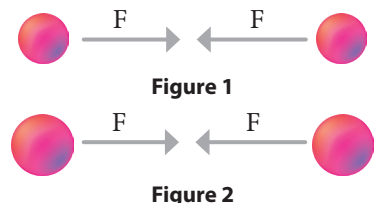


### 3- A) Choose the correct answer:

- A body weighs 30 N on the Moon. Its weight on Earth would be ..... .
  - a) 180 N
  - b) 5 N
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### B) The opposite figure represents the mutual gravitational force between two spherical bodies of the same material. "Arrows indicate the direction of force":

- 1 Arrange the gravitational forces from smallest to largest.
  - The gravitational force represented in figure (2) is greater than in figure (1).
- 2 Mention factors affecting gravitational force between two bodies.
  - 1- The mass of the two bodies.
  - 2- The distance between the centers of the two objects.



### 1- A) Choose the correct answer:

- The number of ..... changes when an atom turns into an ion.
  - a) protons
  - b) electrons
  - c) neutrons
  - d) nucleotides

### B) 1- What happens when ... ?

- 1 A magnet is dipped into iron filings.
  - The iron filings are collected at the poles of the magnet.
- 2 The Moon is in the new moon or full moon phase.
  - Tides reach their highest elevation of water.

### 2- Compare between gravitational force and frictional force "in terms of the type of force":

Gravitational force	Frictional force
Field force	Contact force

### 2- A) Put (✓) or (X):

- Nonmetal atoms tend to gain one or more electrons during a chemical reaction and become positive ions. (X)

### B) Answer the following questions:

- 1 Mention the properties of ionic compounds.
  - 1- Most of them dissolve in water.
  - 2- Their aqueous solutions and their molten conduct electricity.
  - 3- Their melting and boiling points are high.
- 2 What is meant by electrostatic series?
  - It is the arrangement of materials according to the easiness of losing electrons when rubbed together.

### 3- A) Write the scientific term:

- They are materials that are not attracted to the magnet. (Non-magnetic materials)

### B) Give a reason for each of the following:

- 1 Occurrence of orbital motion of the moon around the Earth.
  - Due to the gravitational force between the Earth and the moon.
- 2 The magnetic needle of the compass is placed inside a copper box.
  - To prevent the attraction between the needle and the box material.

تطبيق



مذكرات جاهزة للطباعة

لتحميل الملفات التعليمية مجاناً للمعلم والطالب

مذكرات وملازم / مراجعات وملخصات / امتحانات / كتب الوزارة /  
أدلة المعلم / دفاتر التحضير / سجلات مدرسية / أوراق تأسيس

امسح الكود بموبايلك علشان تقدر تثبت التطبيق

وتقدر ف أي وقت تحمّل ال نفسك فيه ببلاش

هيفنيك عن البحث والجروبات والقنوات الكثيرة

