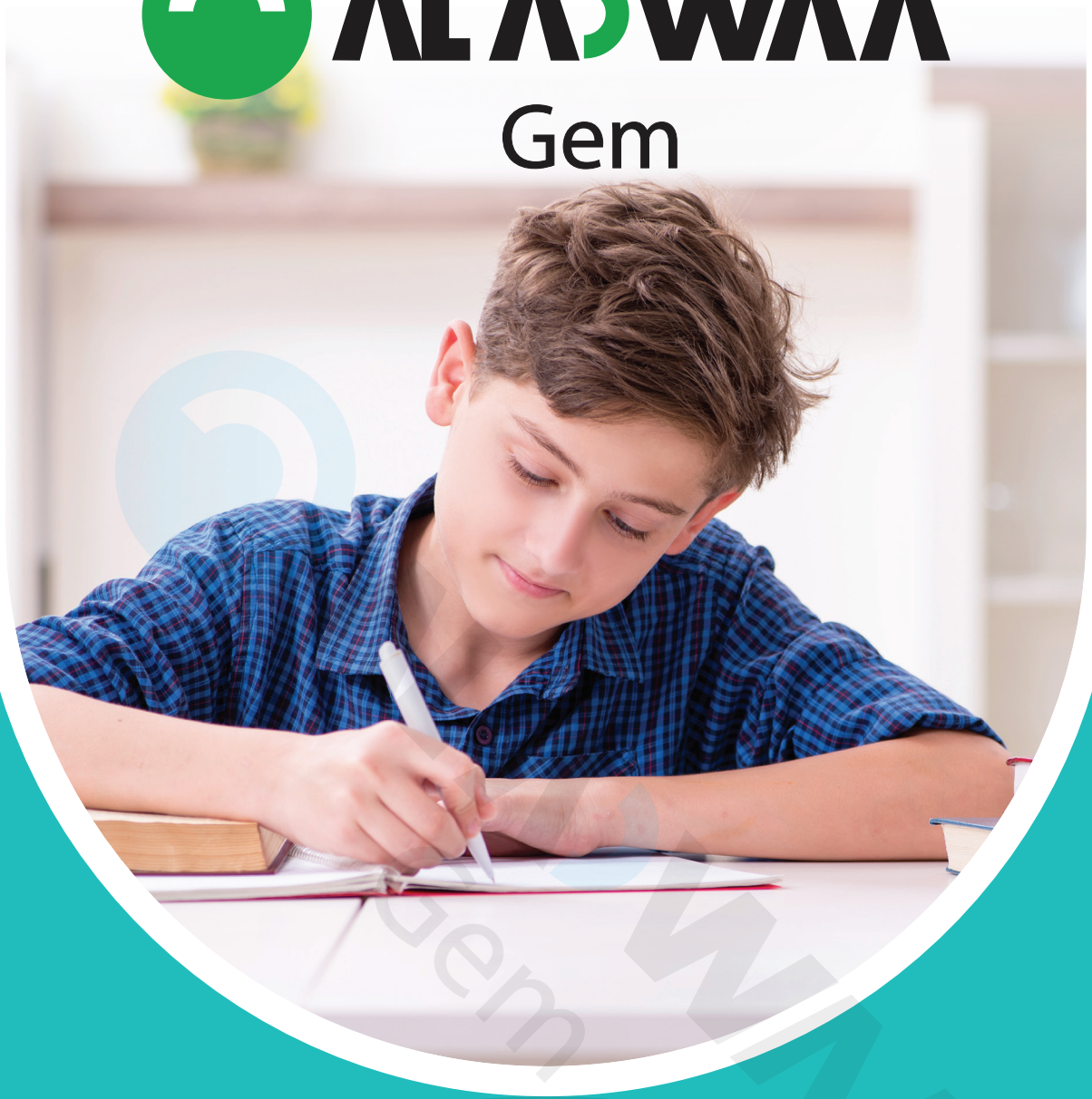
ALADWAA

Gem



Science

الصف 2 الإعدادى

النماذج النهائية للفصل الدراسى الأول

العام الدراسى

2024 - 2025

Model (1) Answer

24 Marks

1 A) Complete the following sentences:

1. The modern periodic table consists of ..... horizontal periods and ..... vertical groups.
2. The Archaeopteryx represents a link between ..... and .....

B) What happens when ...?

1. The percentage of greenhouse gases increases.

.....

2. The atomic number increases within the same group. (with respect to atomic size).

.....

3. Water is polluted with human and animal waste.

.....

4. One of the species is absent in a complicated ecosystem.

.....

A) Write the scientific term:

1. The number of positive protons in the nucleus of an atom. (.....)
2. It is the replica of the internal details of the structure of an old living organism. (.....)

B) Mention one example for each of the following:

1. A polar compound: (.....).
2. Useful rays for the life of living organisms: (.....).
3. Cast fossil: (.....).
4. A solid halogen element: (.....).

ALADWAA Gem

3 A) Cross out the odd word:

1 Troposphere - Isobar - Stratosphere – Mesosphere (.....)

Overhunting - Environmental pollution - Severe earthquakes - Habitat destruction

(.....)

B) Answer the following questions:

First: Calculate the atomic number for each of the following:

Element (X) is in the second period and group 18: (.....).

Element (Y) is in the fourth period and group 1: (.....).

Second: Mention the importance of each of the following:

Van-Allen belts: .....

2 Nummulite fossils: .....

A) Correct the underlined words:

When the temperature of water decreases below 4°C, its density increases. (.....)

An example of a complete body fossil is nummulites . (.....)

B) Answer the following questions:

First: Write the balanced symbolic equation for the following reactions:

Carbon dioxide gas with water: .....

Magnesium with hydrochloric acid: .....

Second: Give a reason

1 Petrified woods are considered as fossils although they look like rocks.

.....

The lower part of the stratosphere is suitable for airplane flights.

.....

ONLINE Gem

Model (2) Answer

24 Marks

1 A) Write the scientific term:

1. The weight of an air column of an atmospheric height on a unit area ($1m^2$). (.....)
2. They are fossils of organisms that had lived for a short period of time in the past and had a wide geographical range distribution, then become extinct. (.....)

B) Answer the following questions:

First: If the temperature at sea level is 26°C:

1. What will the temperature be at the top of a mountain 4 km high?

.....

.....

2. Will the mountain top be covered with snow? (.....)

Second: What is the scientific principle upon which the elements are arranged in:

Bohr Mosely

Bohr: .....

2. Mosely: .....

A) Complete the following sentences:

The appearance of transition elements begins from the ..... period and consists of ..... vertical groups.

The ..... is a recently extinct bird, while the ..... is an endangered species.

B) Answer the following questions:

First: Compare between each of the following:

Simple ecosystem and complex ecosystem:

Simple ecosystem	Complex ecosystem
.....	.....
.....	.....
.....	.....

Thermal pollution and biological pollution in terms of damage:

Thermal pollution	Biological pollution
.....	.....
.....	.....

Second: What happens when ... ?

A magnesium ribbon burns in a tube of oxygen.

.....

ELNAHWAN Gem

2 Normal percentage gases are present in the troposphere.

.....

3 A) Cross out the odd word:

1 Blindness - Liver cancer - Brain cell death - Typhoid (.....)

2 Altimeter - Hoffman's Voltameter - Aneroid - Barometer (.....)

B) Answer the following questions:

First: Mention one use of each of the following:

1 Liquid sodium: .....

2 Silicon: .....

Second: Locate the following elements in the modern periodic table (period and group):

1 $_{13}Al$ 2 $_{20}Ca$

Element	Electronic configuration	Period number	Group number
$_{13}Al$	.....	.....	.....
$_{20}Ca$	.....	.....	.....

4 A) Put (✓) or (X):

1 Water and ammonia are polar compounds. ( )

2 Index fossils indicate the age of sedimentary rocks in which they are found. ( )

B) Give a reason:

1 Liquid nitrogen is used to preserve the cornea of the eye:

.....

2 Mesosphere layer is highly rarefied.

.....

3 A desert ecosystem is affected by the absence of a species.

.....

4 Scientists made multiple attempts to classify elements.

.....

Model (3) Answer

24 Marks

1 A) Complete the following sentences:

1. $CO_2 + H_2O \longrightarrow$ .....
2. ..... is among the endangered plants, while ..... is among the recently extinct animals.

B) Answer the following questions:

First: What is meant by :

- Acidic oxides: .....

Second: Mention the importance of each of the following:

1. Coral fossils: .....
2. Hoffman voltmeter: .....
3. Aneroid: .....

2 A) Put (✓) or (X):

1. When a metal atom loses one or more electrons, it becomes a negatively charged ion. ( )
2. Atmospheric pressure increases on going above the sea level. ( )

B) Answer the following questions:

First: If the temperature at the mountain top is -4°C and at its base is 9°C.

Calculate the: 1 Temperature difference 2 Mountain's height

Solution:

.....

.....

Second: A metallic element X is located in the third period of the modern periodic table. It dissolves in water, forming a solution of XOH, with the release of a colorless gas:

(a) This element belongs to ..... block element.

(b) The valency of this element is .....

(c) The type of its oxide is .....

ONLAYWA Gem

3 A) Write the scientific term:

1. A solidified resinous matter that preserved living organisms embedded in it from decomposition.

(.....)

2. The continuous decrease in the number of living organisms until all members of the species die.

(.....)

B) Give a reason:

1. Tap water should not be stored in plastic mineral water bottles.

.....

2. Most weather phenomena occur in the troposphere.

.....

3. Bald eagle is called this name.

.....

4. Alkali metals are stored under kerosene in the lab.

.....

4 A) Choose the correct answer:

1. Ice crystals are ..... in shape.

a) pentagonal b) hexagonal c) octagonal d) tetragonal

2. ..... is an example of microfossils.

a) Foraminifera b) Mammoth c) Ferns d) Nummulite

B) What happens when ... ?

1. Extenction of species or a group of species from a balanced ecosystem.

.....

2. A living organism is rapidly buried in ice after death.

.....

3. A piece of potassium is added to a container of water.

.....

4. Cosmic rays strike Van Allen radiation belts.

.....

Model (4) Answer

24 Marks

1 A) Write the scientific term:

1. The vertical columns in the modern periodic table. (.....)
2. It is the continuous increase in the average temperature in the Earth's near-surface of air.

(.....)

B) Answer the following questions:

1. Determine the location of the following elements in the modern periodic table.

   (Number of period and group)

   a- $_{10}Ne$: 2, 8 ⟶ .....

   b- $_{17}Cl$: 2, 8, 7 ⟶ .....

2. Look at the opposite picture, then answer:



   a- What is the name of this living organism?

   .....

   b- Is it extinct or endangered?

   .....

2 A) Cross out the odd word:

1. Chlorine / Iodine / Oxygen / Bromine (.....)
2. Nummulite fossil / Ammonite fossil / Fern fossil / Trilobite fossil (.....)

B) 1- Mention the importance of:

a- Fossil record: .....

b- Aneroid: .....

2- Compare between each of the following:

a- Potassium and silver. (According to: their interaction with water)

.....

.....

.....

b- Atmospheric pressure and ozone degree. (According to: the measuring units)

.....

.....

3 A) Choose the correct answer:

1. There is 90% of the mass of atmospheric air is present up to ..... height above the sea level.

a) 3 km b) 13 km c) 16 km d) 20 km

2. ..... fossil indicates the presence of petroleum oil.

a) Mammoth b) Ferns c) Nummulites d) Radiolaria

B) Give a reason for:

1. The atomic size of the elements of one group increases with the increase of the atomic number.

.....

.....

2. The index fossil indicates the age of sedimentary rocks.

.....

3. The upper part of the thermosphere is called ionosphere.

.....

4. Although sugar is a covalent compound, it dissolves in water.

.....

4 A) Correct the underlined words:

1. Liver cancer infection rates increase from the thermal pollution of water. (.....)
2. The temperature at the top of the mesosphere reaches 100°C. (.....)

B) 1- Answer the following questions:

1. What is meant by petrification?

.....

2. List two behaviors that must be taken to protect water from pollution in Egypt.

.....

2- If the temperature at the top of a mountain is -6°C and at the middle of the mountain height is 13.5°C.

1. Calculate the height of the mountain?

.....

2. What is the temperature at the foot of the mountain?

.....

.....

Model (5) Answer

24 Marks

1 A) Complete the following sentences:

1. 2 KBr + ... → 2KCl + ...
2. Amber fossil is considered a ..... fossil of organisms, while the fossil of radiolaria is considered a ..... fossil.

B) What happens when ...?

1. The death of a living organism and its rapid burial in a medium that preserves it from decomposition.

.....

2. The absence of the ozone layer from the atmosphere.

.....

3. An element from group (7A) reacts with an element from group (1A).

.....

4. Approaching a burning match to the cathode of Hoffmann voltameter during the electrolysis of acidified water.

.....

4 A) Cross out the odd word:

1. Papyrus Plant / Panda / Bald Eagle / Quagga. (.....)
2. Zn / Fe / Ag / K. (.....)

B) Write the numbers that indicate each of the following:

1. The number of oxygen molecules in 4 molecules of ozone gas.

.....

2. Thickness of the mesosphere layer.

.....

3. The number of elements that are not available in the Earth's crust and are prepared artificially under special conditions.

.....

4. The number of regions between the layers of the atmosphere.

.....

3 A) Choose the correct answer:

1. All the following gases are greenhouse gases, except .....

a) N_2O b) H_2O c) CH_4 d) O_2

2 In the water molecule, the angle between the two single covalent bond is .....

a) 64° b) 104° c) 104.5° d) 140.5°

B) Compare between each of the following:

1 Sodium - Silver (According to: interaction with water)

.....

.....

2 Ras Mohammed protectorate - Yellowstone protectorate (According to: the most important protected species)

.....

.....

3 Troposphere layer – Stratosphere layer (According to: the air movement)

.....

.....

4 Element X_{17} and Element Y_{19}. (According to: the number of group)

.....

.....

4 A) Write the scientific term:

1 Brightly colored light curtains seen at both the north and south poles of the Earth.

(.....)

2 The ability of the atom in the covalent molecule to attract chemical bonding electrons towards it.

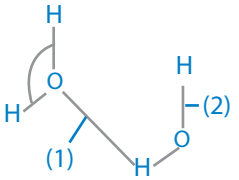
(.....)

B) Answer the following questions:

1 Not all bases are considered alkaloids. Explain.

.....

2 Look at the following figures, then answer:

			
a. What is the atomic number of the element proceeding it in the same group?	b. Which bond is stronger (1) or (2)?	c. What is the type of this fossil?	d. What is the name of this endangered bird? .....