

SCIENCE

نماذج اختبارات الأضواء

لشهر أكتوبر

الصف
2
الإعدادي
الفصل الدراسي الأول



1- A) Choose the correct answer:

- The attraction force between ice particles before melting is the attraction force between them after melting.

a) less than b) greater than c) equal to d) weaker than

B) Give a reason for:

- 1 The color of potassium permanganate spreads faster in hot water than in cold water.

•

- 2 The boiling point of water at the top of a mountain is different from its boiling point at sea level.

•

- 3 Liquids and gases are called fluids.

•

2- A) Complete the following sentence:

- The internal energy of a system = + of all particles in the system.

B) What is meant by ...?

- 1 Sublimation process

•

- 2 Temperature

•

3- A) Write the scientific term:

- Substances that can flow and take the shape of the container that holds them.

(.....)

B) What happens when ...?

- 1 The temperature of the medium increases "in terms of the rate of diffusion of the particles through it"

•

- 2 The humidity of the air increases near a water surface "in terms of the rate of evaporation"

•

1- A) Put (✓) or (X):

- The boiling point of water is 100 degree Celsius. ()

B) First: Give a reason for:

- 1 The internal energy of a system increases when it gains heat energy.

•

Second: Mention the factors that the diffusion rate depends on.

•

2- A) Choose the correct answer:

- Loss of heat energy occurs during
 - a) evaporation of seawater
 - b) melting of polar ice
 - c) water freezing
 - d) boiling of water

B) First: Compare between each of the following:

- 1 Solids and gases "in terms of interparticle spaces and attraction forces"

.....

- 2 Open system and closed system "in terms of the exchange of energy and matter with surroundings"

Open system	Closed system
.....
.....

Second: What are the factors affecting the rate of evaporation of liquids?

•

3- A) Complete the following sentence:

- The particles of matter move from an area of concentration to an area of concentration.

B) What happens when ...?

- 1 The temperature of water vapour in the air decreases below zero degrees Celsius.

•

- 2 Gases pass through a high electric field

•

1- A) Complete the following sentence:

- matter can flow and be compressed, while matter can only flow.

B) First: What happens when ...?

- 1 The solid substance gains thermal energy

•

Second: What is meant by ...?

- 1 Brownian motion

•

- 2 Deposition process

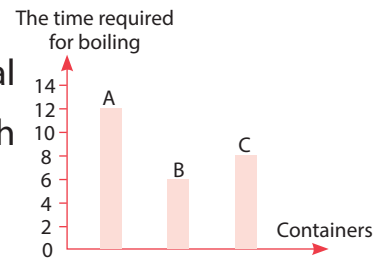
•

2- A) Put (✓) or (X):

- A closed bottle of soft drink placed in ice is considered an isolated system. ()

B) Look at opposite figure, then answer:

Three different amounts of water were heated in three identical containers, and the opposite graph shows the time that each amount took to reach the boiling point.



- 1 Which of these containers contains the smallest amount of water?
•
- 2 What is the independent variable and what is the controlled variable in this experiment?
•

3- A) Choose the correct answer:

- Which of the following properties is used to distinguish between gases and liquids?
a) Mass b) Compressibility c) Shape d) Color

B) Answer the following questions:

- 1 What is the relationship between the viscosity of a liquid and its flow rate?
•
- 2 What happens if the dry ice is left in air.
•

1- A) Put (✓) or (X):

- Liquids can be compressed and can flow because they have weak attraction forces between its particles. ()

B) Answer the following questions:

- 1 Cross out the odd word, then mention the relation between the left words:

compressible - indefinite shape - can't flow - indefinite volume

•

- 2 What is meant by ...? - Fluidity

•

- 3 Why does salt dissolve faster in hot water than in cold water?

•

2- A) Complete the following sentence:

- When the surface area of a liquid exposed to air increases, the rate of evaporation

B) Give a reason for:

- 1 The boiling point is a characteristic property of pure substances, unlike evaporation.

•

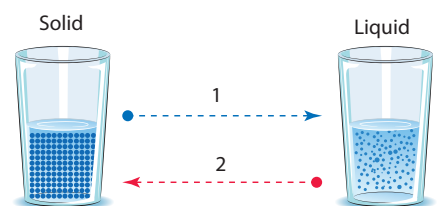
- 2 A soft drink metal can is considered a closed system.

•

3- A) Write the scientific term:

- It separates the system from its surroundings. (.....)

B) Look at the opposite figure, then answer:



- 1 During process no. 1 , the interparticle spaces between solid particles and they will move

- 2 Process no. 2 is called

1- A) Choose the correct answer:

- When a substance gains heat, its particles
 a) come closer b) move slower c) move faster d) stay still

B) Give a reason for:

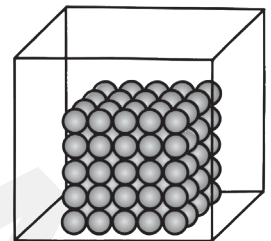
- 1 Solids have definite shape and volume.
 ●
- 2 Plasma is used in air-conditioning systems.
 ●
- 3 The boiling point of pure water becomes less than 100°C as we go up above sea level.
 ●

2- A) Complete the following sentence:

- A medical thermometer is an example of a, while a teapot is an example of an

B) Look at the opposite figure, then answer:

- 1 What is the state of the opposite matter?
 ●
- 2 Is it a fluid? And why?
 ●



3- A) Put (✓) or (X):

- Using a pressure cooker in cooking reduces cooking time and saves fuel. ()

(B) What happens when ...?

- 1 The liquid substance gain energy
 ●
- 2 The system gains thermal energy from the surroundings
 ●

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1- A) Choose the correct answer:

- The attraction force between ice particles before melting is the attraction force between them after melting.
a) less than b) **greater than** c) equal to d) weaker than

B) Give a reason for:

- 1 The color of potassium permanganate spreads faster in hot water than in cold water.
 - **Because when temperature increases, the kinetic energy of the particles increases, so their ability to diffuse also increases.**
- 2 The boiling point of water at the top of a mountain is different from its boiling point at sea level.
 - **Because as we go higher, the atmospheric pressure decreases, so the boiling point decreases.**
- 3 Liquids and gases are called fluids.
 - **Because both have the ability to flow.**

2- A) Complete the following sentence:

- The internal energy of a system = **potential energy + kinetic energy** of all particles in the system.

B) What is meant by ...?

- 1 Sublimation process
 - **It is the process in which a substance changes from the solid state directly into the gaseous state without passing through the liquid state.**
- 2 Temperature
 - **It is a measure of the average kinetic energy of the particles.**

3- A) Write the scientific term:

- Substances that can flow and take the shape of the container that holds them. (Fluids)

B) What happens when ...?

- 1 The temperature of the medium increases "in terms of the rate of diffusion of the particles through it"
 - **The diffusion rate of the particles increases.**
- 2 The humidity of the air increases near a water surface "in terms of the rate of evaporation"
 - **The rate of evaporation decreases.**

1- A) Put (✓) or (X):

- The boiling point of water is 100 degree Celsius. (✓)

B) First: Give a reason for:

- 1 The internal energy of a system increases when it gains heat energy.
 - Because the kinetic energy of the system's particles increases.

Second: Mention the factors that the diffusion rate depends on.

- 1- the temperature of the medium. 2- the mass of the particles.

2- A) Choose the correct answer:

- Loss of heat energy occurs during
 - a) evaporation of seawater
 - b) melting of polar ice
 - c) water freezing
 - d) boiling of water

B) First: Compare between each of the following:

- 1 Solids and gases "in terms of interparticle spaces and attraction forces"

Points of comparison	Solids	Gases
Interparticle spaces	Very small	Very large
Attraction forces	Very strong	Very weak

- 2 Open system and closed system "in terms of the exchange of energy and matter with surroundings"

Open system	Closed system
It allows the exchange of both energy and matter with surroundings.	It allows the exchange of energy but doesn't allow the exchange of matter with surroundings.

Second: What are the factors affecting the rate of evaporation of liquids?

- 1- Temperature
- 2- Surface area of the liquid
- 3- Humidity percentage
- 4- Air currents

3- A) Complete the following sentence:

- The particles of matter move from an area of higher concentration to an area of lower concentration.

B) What happens when ...?

- 1 The temperature of water vapour in the air decreases below zero degrees Celsius.
 - Frost forms on the surfaces of crops and cars.
- 2 Gases pass through a high electric field
 - Their atoms convert into positively charged ions and negatively charged electrons.

1- A) Complete the following sentence:

- **Gaseous** matter can flow and be compressed, while **liquid** matter can only flow.

B) First: What happens when ...?

- 1 The solid substance gains thermal energy
 - The attraction forces between its particles become weak, their kinetic energy increases and the temperature rises to its melting point.

Second: What is meant by ...?

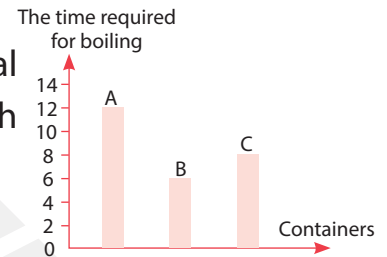
- 1 Brownian motion
 - It is the random motion of large particles suspended in a fluid occurs due to the collision between the molecules of fluids and these particles.
- 2 Deposition process
 - It is the change of a substance directly from the gaseous state to the solid state without passing through the liquid state.

2- A) Put (✓) or (X):

- A closed bottle of soft drink placed in ice is considered an isolated system. (X)

B) Look at opposite figure, then answer:

Three different amounts of water were heated in three identical containers, and the opposite graph shows the time that each amount took to reach the boiling point.



- 1 Which of these containers contains the smallest amount of water? • **Container (B) as it takes the shortest time to evaporate**
- 2 What is the independent variable and what is the controlled variable in this experiment?
 - **Independent variable: mass of the substance / Controlled variable: type of substance "water"**

3- A) Choose the correct answer:

- Which of the following properties is used to distinguish between gases and liquids?

a) Mass b) **Compressibility** c) Shape d) Color

B) Answer the following questions:

- 1 What is the relationship between the viscosity of a liquid and its flow rate?
 - **Liquids with high viscosity have low ability to flow, while liquids with low viscosity flow more easily and faster.**
- 2 What happens if the dry ice is left in air.
 - **It changes directly from a solid to a gas without becoming a liquid.**

1- A) Put (✓) or (X):

- Liquids can be compressed and can flow because they have weak attraction forces between its particles. (X)

B) Answer the following questions:

- 1 Cross out the odd word, then mention the relation between the left words:
compressible - indefinite shape - can't flow - indefinite volume

• (can't flow) (properties of gas)

- 2 What is meant by ...? - Fluidity

• It is the ability of a substance to flow easily.

- 3 Why does salt dissolve faster in hot water than in cold water?

• Because as temperature increases, particle motion increases, and the interparticle spaces between particles increase, helping faster dissolution.

2- A) Complete the following sentence:

- When the surface area of a liquid exposed to air increases, the rate of evaporation increases.

B) Give a reason for:

- 1 The boiling point is a characteristic property of pure substances, unlike evaporation.

• Because boiling occurs at a fixed temperature for each pure substance, while evaporation can occur at any temperature.

- 2 A soft drink metal can is considered a closed system.

• Because it allows the transfer of energy (heat) but does not allow the transfer of matter in or out of the can.

3- A) Write the scientific term:

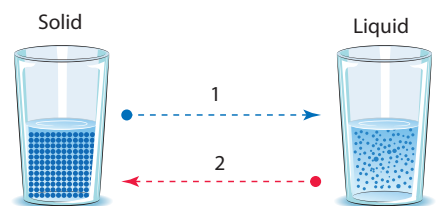
- It separates the system from its surroundings.

(Boundary)

B) Look at the opposite figure, then answer:

- 1 During process no. 1, the interparticle spaces between solid particles increase and they will move faster.

- 2 Process no. 2 is called freezing.



1- A) Choose the correct answer:

- When a substance gains heat, its particles
 - a) come closer b) move slower c) move faster d) stay still

B) Give a reason for:

- 1 Solids have definite shape and volume.
 - Because the attraction forces between their particles are very strong the particles are tightly packed and cannot move from their positions.
- 2 Plasma is used in air-conditioning systems.
 - To improve air quality in enclosed spaces.
- 3 The boiling point of pure water becomes less than 100°C as we go up above sea level.
 - Because atmospheric pressure decreases as altitude increases, causing water to boil at a lower temperature.

2- A) Complete the following sentence:

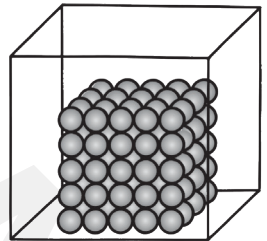
- A medical thermometer is an example of a **closed system**, while a teapot is an example of an **open system**.

B) Look at the opposite figure, then answer:

- 1 What is the state of the opposite matter?

Solid state.
- 2 Is it a fluid? And why?

No, because it has a fixed shape and cannot flow.



3- A) Put (✓) or (X):

- Using a pressure cooker in cooking reduces cooking time and saves fuel. (✓)

(B) What happens when ...?

- 1 The liquid substance gain energy
 - The particles move faster and the substance may change into a gas.
- 2 The system gains thermal energy from the surroundings
 - Heat is transferred to the system, its internal energy increases, and its temperature rises.

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

هيغنك عن البحث والجروبات والقنوات الكثيرة

