

تم تحميل هذا الملف من موقع المناهج الإماراتية



## حل تجميعية أسئلة مراجعة منهج انسابير

موقع المناهج ← المناهج الإماراتية ← الصف التاسع المتقدم ← علوم ← الفصل الأول ← حلول ← الملف

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ملفات اكتب للمعلم اكتب للطالب | اختبارات الكترونية | اختبارات | حلول | عروض بوربوينت | أوراق عمل  
منهج انجليزي | ملخصات وتقارير | مذكرات وبنوك | الامتحان النهائي للمدرس

المزيد من مادة  
علوم:

## التواصل الاجتماعي بحسب الصف التاسع المتقدم



صفحة المناهج  
الإماراتية على  
فيسبوك

الرياضيات

اللغة الانجليزية

اللغة العربية

التربية الاسلامية

المواد على تلغرام

## المزيد من الملفات بحسب الصف التاسع المتقدم والمادة علوم في الفصل الأول

تجميعية أسئلة مراجعة منهج انسابير

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حل نموذج اختبار تجريبي وفق الهيكل الوزاري

2

نموذج اختبار تجريبي وفق الهيكل الوزاري

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حل تجميعية أسئلة متوقعة ليلة الامتحان

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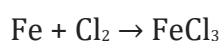
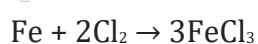
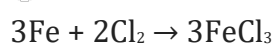
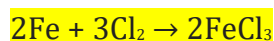
### Term 1 grade 9A biology textbook questions

#### Which statement is true of chemical equations?

- Reactants and products come before the arrow.
- Reactants and products both come after the arrow.
- Reactants come before the arrow, products come after.
- Reactants come after the arrow, products come before.

#### Which of the following equations is balanced?

Multiple choice question.



#### Why must the number and type of atoms in the reactants equal the number and type atoms in the products formed?

Multiple choice question.

- Atoms are converted to other elements by chemical reactions.
- The law of conservation of mass says matter cannot be created or destroyed.
- Chemical processes convert between matter and energy.
- Energy released by an exothermic reaction must balance energy absorbed by an endothermic one.

#### To develop a product that warms people's hands, would you use an exothermic or endothermic reaction? Why?

Multiple choice question.

- Exothermic; that way the reaction will release heat.
- Endothermic; that way the reaction will absorb heat.
- Endothermic; that way the reaction will release heat.
- Exothermic; that way the reaction will absorb heat.

#### Why is the active site of an enzyme important to enzyme activity?

Multiple choice question.

- It raises the activation energy of a reaction.
- It allows the enzyme to interact with a large variety of substrates.
- It allows the enzyme to catalyze very specific reactions.
- It allows an endothermic reaction to run as an exothermic reaction.

**How do enzymes affect a chemical reaction, making it easier to occur?**

Multiple choice question.

- They raise the activation energy.
- They make the reaction endothermic.
- They reduce the activation energy.
- They make the reaction exothermic.

**Which statement is not true about pure water?**

Multiple choice question.

- It is adhesive and cohesive due to hydrogen bonds.
- It is composed of polar molecules.
- It is a good solvent.
- It is composed of ionic bonds.



**What does the image show?**

Multiple choice question.

- a homogeneous mixture
- a suspension
- a heterogeneous mixture
- a solution

**Which of the following is not a property of water?**

- It is cohesive.
- It is a good solvent.
- It combusts.
- It is adhesive.

**What is a base?**

- a substance that decreases pH
- a substance that releases hydroxide ions (OH<sup>-</sup>) into solution
- a substance that quenches chemical reactions
- a substance that releases hydrogen ions (H<sup>+</sup>) into solution

**How are water molecules in a rain drop held together?**

Multiple choice question.

- van der Waals forces
- ionic bonds
- attraction between positive charges
- attraction between negative charges

**Which of the following can be classified as a van der Waals force?**

Multiple choice question.

- a weak electrostatic interaction between two polar molecules
- a non-polar covalent bond
- a polar covalent bond
- a strong electrostatic interaction between two atoms in an ionic bond

**Why are intermolecular forces, such as van der Waals forces, important to biological function?**

Multiple choice question.

- They are stronger than ionic or covalent bonds.
- They are easy to form and break apart, making them ideal for long-term interactions.
- They are easy to form and break apart, making them ideal for short-term interactions.
- Intermolecular forces do not play a major role in biological functions.

**Which of the following functions can be attributed to carbohydrates?**

Multiple choice question.

- structural support
- signaling between cells
- energy storage
- all of the above

**What is the ratio of carbohydrates in a monosaccharide?**

Multiple choice question.

- 1 carbon: 3 hydrogen: 1 oxygen
- 1 carbon: 2 hydrogen: 1 oxygen
- 1 carbon: 2 hydrogen: 2 oxygen
- 2 carbon: 1 hydrogen: 2 oxygen

**Which of the following compounds can be classified as a proteins?**

Multiple choice question.

- polysaccharides
- nucleic acids
- fatty acids
- enzymes

**Which of the following joins amino acids together?**

Multiple choice question.

- peptide bonds
- metallic bonds
- ionic bonds
- van der Waals forces

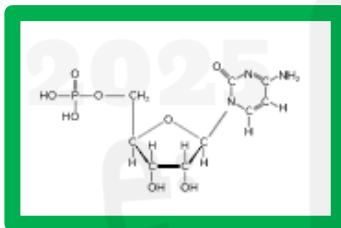
**Why is the sequence of amino acids important to protein function?**

Multiple choice question.

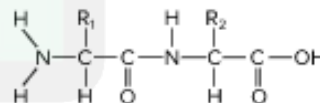
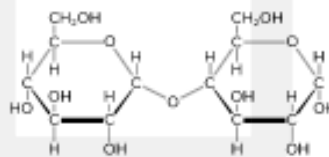
- Amino acids can only be combined in a specific order, otherwise the bonds will fall apart.
- The order of the amino acids can be read like a code to assemble DNA.
- The sequence of amino acids doesn't have an effect.
- The order of amino acids determines the shape a protein will take.

**Which of these best shows the structure of a nucleotide?**

Multiple choice question.



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**Which of the following functions can be attributed to nucleic acids and nucleotides?**

Multiple choice question.

- barrier in biological membranes
- long-term energy storage
- chemical signaling between cells
- genetic information storage and transmission

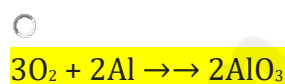
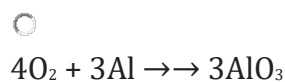
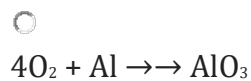
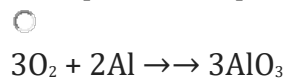
**Which biological macromolecule is not considered a polymer?**

Multiple choice question.

- a nucleic acid
- a lipid
- a protein
- a carbohydrate

**Which equation satisfies the law of conservation of matter?**

Multiple choice question.



**Biological buffers work to keep pH in your body in a range of \_\_.**

Multiple choice question.

6.5 - 7.5

5.5 - 6.5

7.5 - 8.5

4.5 - 5.5

**Which macromolecule is involved in nearly every function in the human body?**

Multiple choice question.

- protein
- lipid
- carbohydrate
- nucleic acid

**Which macromolecule stores genetic information for an organism?**

- lipid
- nucleic acid
- carbohydrate
- protein

**Which macromolecule is responsible for the formation of a cell's membrane?**

Multiple choice question.

- carbohydrates
- proteins
- nucleic acids
- lipids

**What is an active site?**

Multiple choice question.

- the specific place where a substrate binds on an enzyme
- a mixture that maintains the pH of a solution within a specific range
- a molecule that acts as a biological catalyst
- the reactant to which an enzyme binds

**What is a polymer?**

Multiple choice question.

- a large molecule formed from smaller identical (or nearly identical) repeating units
- a combination of two or more different substances in which each substance keeps its individual characteristics
- a pure substance with unique properties, formed when two or more different elements combine
- a molecule that speeds up biological reactions by lowering activation energy

**What is a polar molecule?**

Multiple choice question.

- a molecule that has lost or gained electrons
- a molecule that produces hydroxide ions (OH<sup>-</sup>) in solution
- a molecule with oppositely charged regions
- a large molecule formed by joining smaller molecules together

**During the nineteenth century, many scientists and naturalists studied microscopic organisms using magnifying lenses and simple microscopes. After studying plant tissues, animal tissues, and protozoans under the microscope, scientists summarized their observations of cells and formulated the cell theory.**

**Which would not be included as part of the cell theory?**

Multiple choice question.

- Parent cells pass genetic material on to daughter cells.
- Cells are the building blocks of living structures.
- Unicellular organisms can grow from organic molecules.**
- All living things are made of one or more cells.

**Science students in Alma's class are observing prepared slides of the cells of maple tree leaves and mammal skin cells. As they study the cells under the microscope's highest magnification, their teacher records their observations on the board. Which would be included in the teacher's list?**

Multiple choice question.

- The leaf cells have green organelles called chloroplasts; the animal cells do not.**
- The skin cells have a nucleus, but the cells of the leaves have no nucleus.
- Both the animal and plant cells have an oval shape and are about the same size.
- Both types of cells have a membrane that is also surrounded by a cell wall.

**What is the definition of the cell theory? It states that:**

Multiple choice question.

- All cells have a plasma membrane and genetic material called DNA.
- The cell is the basic structural and functional unit of all living organisms.
- Organisms are made of one or more cells, cells are the basic unit of life, and all cells come only from other cells.**
- Eukaryotic cells are larger than prokaryotic cells.

**What is the definition of selective permeability?**

Multiple choice question.

- It is the process of maintaining balance in an organism's internal environment.
- It is layers composed of phospholipid molecules arranged with polar heads facing outside and non-polar tails facing the inside.
- It is the property of the plasma membrane that allows it to control movement of substances into or out of the cell.**
- It moves needed substances or waste materials through the plasma membrane.



### What is homeostasis?

Multiple choice question.

- the process of maintaining balance in an organism's internal environment
- a membrane which allows some substances to pass through while keeping others out
- the ability to move needed substances or waste materials through the plasma membrane
- the ability to arrange phospholipids in a way that allows the plasma membrane to tolerate the watery environment

### Which of the following is not a main factor that affects the rate of diffusion?

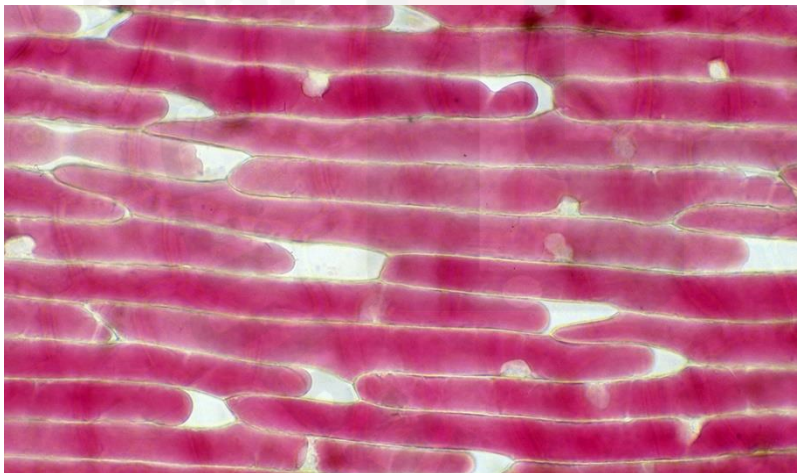
Multiple choice question.

- conductivity
- temperature
- pressure
- concentration

**A molecule that is important for cell functioning cannot diffuse through the plasma membrane, but needs a protein that can open and close to allow the molecule to diffuse. What is this protein called?**

Multiple choice question.

- carrier protein
- receptor protein
- channel protein
- motor protein



**What type of solution are these cells in? What would be the net movement of water?**

- isotonic; zero
- hypertonic, into the cell
- hypertonic; out of the cell
- hypotonic; into the cell

- hypotonic; out of the cell

### What is the function of the nuclear envelope?

Multiple choice question.

- It stores genetic information for protein production.
- It surrounds the nucleus by a double membrane.
- It allows larger-sized substances to move in and out of the nucleus.
- It produces ribosomes.

### What is the function of the nuclear pores?

Multiple choice question.

- They store genetic information for protein production.
- They allow larger-sized substances to move in and out of the nucleus.
- They produce ribosomes.
- They surround the nucleus by a double membrane.

### Where do light-dependent reactions take place?

Multiple choice question.

- grana
- cristae
- thylakoids
- stroma

### What is the function of the smooth ER?

Multiple choice question.

- A variety of complex carbohydrates and lipids are synthesized.
- Carbohydrates, lipids, and other substances are consumed.
- It surrounds the nucleus with a double membrane.
- Proteins are synthesized and produced.

### Which scientist revolutionized the way biologists think about the evolutionary history of eukaryotes?

Multiple choice question.

- Pasteur
- Schleiden
- Margulis
- Virchow

**Which organelle produces protein for a cell?**

- ribosome
- endoplasmic reticulum
- nucleus
- Golgi apparatus

**Which organelle is large in plant cells but small or absent in animal cells?**

Multiple choice question.

- chloroplast
- centriole
- vacuole
- nucleolus

**How do carrier proteins facilitate active transport?**

Multiple choice question.

- Carrier proteins create an isotonic solution.
- Carrier proteins block the plasma membrane.
- Carrier proteins move substances from a low to high concentration.
- Carrier proteins move substances from a high to low concentration.

**Predict how oxygen crosses the plasma membrane if the concentration of oxygen is lower inside the cell than it is outside the cell.**

Multiple choice question.

- Oxygen enters the cell through channel proteins.
- Oxygen leaves the cell through channel proteins.
- Oxygen enters the cell through the plasma membrane.
- Oxygen leaves the cell through the plasma membrane.

**Which organelle is called the "powerhouse of the cell"?**

Multiple choice question.

- nucleus
- vesicle
- mitochondria
- ribosome

**Which organelle is present in a paramecium protozoan but absent in the cells of a strawberry plant?**

- cytoskeleton
- cilia
- nucleus
- microtubule

**Which defines a cell?**

Multiple choice question.

- protein molecules in animals
- the smallest type of animal
- microscopic organisms in water
- the basic unit of living things

**Which structure is made of protein fibers that form the cell's supporting network?**

Multiple choice question.

- endoplasmic reticulum
- cell wall
- cytoskeleton
- plasma membrane

**The condition of continuous, random movement of particles but no overall change in concentration of materials is called \_\_.**

Multiple choice question.

- diffusion
- osmosis
- passive transport
- dynamic equilibrium

**Sonia's teacher asks the class to observe a potted plant and to identify several plant structures and their functions. What could be included in the list?**

Multiple choice question.

- Roots transport water, stems provide support, and leaves collect food and water.
- Roots absorb water, hollow stems transport water, and leaves make food.
- Roots make food, stem tissues transport food, and leaves collect water.
- Roots absorb dissolved nutrients, stems provide support, and leaves make food.

**Which of the following is true about sclerenchyma plant cells?**

Multiple choice question.

- Sclerenchyma plant cells lack living components when they mature.
- Sclerenchyma plant cells maintain the greatest variety of organelles.
- Sclerenchyma plant cells are spherical in shape, with thin cell walls.
- Sclerenchyma plant cells have an elongated shape and can be stretched.

**What is the function of parenchyma cells?**

Multiple choice question.

- undergo cell division to help repair a plant
- form wood to support the entire plant
- provide support for surrounding cells
- accelerate plant growth in stems and roots

**If a sunflower plant lost all of its collenchyma cells, it would \_\_.**

Multiple choice question.

- turn brown
- stop growing
- lose petals
- fall over

**Which is the vascular tissue that transports water and dissolved minerals from roots to leaves?**

Multiple choice question.

- xylem
- parenchyma
- epidermis
- phloem

**Which of the following produce cells that results in an increase in length?**

- lateral meristems
- vascular cambium
- apical meristems
- intercalary meristems

**Which vascular tissue is composed of living tubular cells that carry sugars from the leaves to other parts of the plant?**

- xylem
- phloem
- cambium
- parenchyma

**Which of the following enables exchange of gases?**

- phloem
- stomata
- xylem
- parenchyma

**Which control(s) the movement of water vapor through the stomata?**

Multiple choice question.

- guard cells
- pericycle
- vascular tissues
- bark

**Which of the following is an example of a nastic response?**

Multiple choice question.

- grapevine wrapping around a flowerpot
- upward growth of a new stem
- houseplant growing toward a window
- sunflower bending toward the Sun

**What is a main difference between apical and lateral meristems?**

Multiple choice question.

- laterals are never seen in eudicots; apicals are typically in eudicots
- apical results in photosynthesis; lateral results in gas exchange
- apical results in primary growth; lateral results in secondary growth
- apical increases root diameter; lateral increases plant height

**The stem of a white potato plant is a \_\_.**

Multiple choice question.

- bulb
- tuber
- stolon
- corm

**Which is the function of the root cap?**

Multiple choice question.

- absorb water and nutrients
- protect root tissues
- transport dissolved substances
- promote root growth

**Under a microscope, you observe plant cells that resemble pieces of a jigsaw puzzle, with interlocking ridges and dips. These cells are most likely cells of the \_\_.**  
Multiple choice question.

- xylem
- epidermis
- apical meristem
- lateral meristem

**Which of the following statements best describes xylem and phloem?**

Multiple choice question.

- Xylem transports water away from the roots. Phloem transports dissolved sugars and other compounds both from the leaves to the roots and from the roots to the leaves.
- Phloem transports water both from the leaves to the roots and from the roots to the leaves. Xylem transports dissolved sugars and other compounds away from the roots.
- Phloem transports water away from the roots. Xylem transports dissolved sugars and other compounds both from the leaves to the roots and from the roots to the leaves.
- Xylem transports water both from the leaves to the roots and from the roots to the leaves. Phloem transports dissolved sugars and other compounds away from the roots.

**Rebecca and several friends are at the beach for the day. By the end of the day, the girls' skin has begun to tan, and questions about tanning leads Rebecca's friend to ask about the purpose of skin. Rebecca's father is a dermatologist, and she asks him about the different functions of skin. What is one answer Rebecca's father gives?**

Multiple choice question.

- Skin stores vital minerals needed by the body.
- Heat absorbed by skin warms the body core.
- The layers of skin prevent feelings of pain.
- One skin layer makes vitamin D for the body.

**Kalil is assembling a model of a human skeleton for his coach's lecture about common sports injuries. Which bone placement will Kalil make?**

Multiple choice question.

- The clavicle connects two major leg bones.
- The patella is between the skull and vertebrae.
- The radius and ulna are bones in the shoulder.
- The upper ribs are connected to the sternum.

**Which of the following is the primary organ of the integumentary system?**

Multiple choice question.

- skin
- organ
- ligament
- bone

**What are two features of temperature regulation in skin?**

Multiple choice question.

- melanoma and vitamin D production
- melanin and vitamin D production
- platelets and clotting
- fatty tissues and sweating

**Which of the following structures lubricates the skin?**

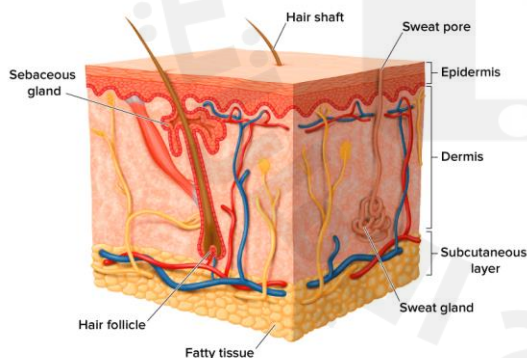
Multiple choice question.

- sebaceous gland
- hair
- hair follicle
- acne

**Which of these is not one of the four main types of skin tissues?**

- nerve
- keratin
- connective
- epithelial

**What important function does the bottom skin layer in this image have?**



Multiple choice question.

- waterproofs skin
- opens pore
- absorbs sunlight
- regulates temperature



**What structure produces oil?**

Multiple choice question.

- acne
- sebaceous gland
- hair
- hair follicle

**Which of these are not important functions of the skeletal system?**

Multiple choice question.

- helps maintain homeostasis; stores minerals
- stores minerals; provides support
- transmits nerve signals; produces actin
- forms platelets; stores minerals

**Which type of joint allows a piano player's fingers to play music?**

Multiple choice question.

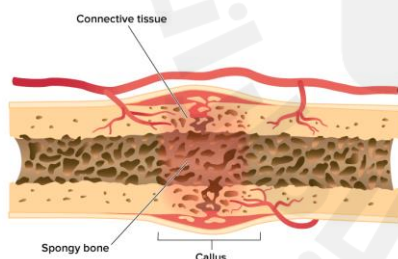
- pivot
- hinge
- gliding
- suture

**What is the proper sequence of bone repair?**

Multiple choice question.

- fracture/swelling—remodeling—callus formation
- remodeling—callus formation—fracture/swelling
- fracture/swelling—callus formation—remodeling
- callus formation—fracture/swelling—remodeling

**What type of cell is working during this phase of bone repair?**



Multiple choice question.

- marrow cells
- compact cells
- osteoblasts
- cardiac cells

**Which of these are *not* important functions of the skeletal system?**

Multiple choice question.

- stores minerals; provides support
- forms platelets; stores minerals
- transmits nerve signals; produces actin
- helps maintain homeostasis; stores minerals

**Muscles arranged in a network with efficient and rhythmic contractions are called \_\_ muscles.**

Multiple choice question.

- skeletal
- voluntary
- antagonistic
- cardiac

**The part of the muscle that contracts is the \_\_.**

Multiple choice question.

- muscle fiber
- myosin
- sarcomere
- actin

**What do muscles require for *aerobic* ATP production?**

Multiple choice question.

- carbon dioxide and cellular respiration
- alcohol fermentation
- lactic acid fermentation
- oxygen and cellular respiration

**Protein filaments that make up myofibrils are called \_\_.**

Multiple choice question.

- sarcomeres and myosin
- actin and myosin
- cardiac cells and sarcomeres
- sarcomeres and actin

**What do muscles require for ATP production?**

Multiple choice question.

- oxygen and cellular respiration
- an anaerobic process
- anaerobic fermentation
- lactic acid and fermentation

**Which of the following statements is not true regarding sliding filament theory?**

Multiple choice question.

- Actin filaments slide together.
- Myosin filaments slide together.
- Myosin filaments remain still.
- Contractions are activated by nerve signals.

**Which is part of the repair process to heal a broken bone?**

Multiple choice question.

- Osteoclasts remove dead bone cells to clean the site.
- Endorphins cause inflammation to hasten cell division.
- Osteoblasts form rigid structures to immobilize the site.
- A blood clot temporarily keeps blood from the bone.

**Which explains why a person's skin becomes darker when frequently exposed to sunlight?**

Multiple choice question.

- Sebaceous glands secrete additional oil for protection.
- Exposure to sunlight causes melanin to be produced.
- Epithelial cells in the epidermis stretch to protect tissues.
- Cells in the dermis layer become thicker and layered.

**Which occurs in the integumentary system after a deep injury occurs to the system?**

Multiple choice question.

- Epidermis cells increase their size.
- Dermis cells close the injured vein.
- Red blood cells fight off pathogens.
- Blood quickly clots to form a scab.

**Which is part of the appendicular skeleton?**

Multiple choice question.

- clavicle
- sternum
- vertebra
- skull

**Grasping a tennis ball in the palm of the hand is made possible by \_\_.**

Multiple choice question.

- hinge joints
- suture joints
- pivot joints
- gliding joints

**Which would cause fatigue in the body of a long-distance runner?**

Multiple choice question.

- metabolizing oxygen aerobically
- buildup of lactic acid in muscles
- excess ATP created in muscle cells
- decrease of fermentation energy

**Which of the following best describes myofibrils?**

Multiple choice question.

- muscles' functional units that contract
- muscle fibers composed of myosin and actin
- protein filaments that are the smallest units of muscle fibers
- groups of antagonistic muscles

**Which of the following helps lubricate skin and hair?**

Multiple choice question.

- sebaceous glands
- keratin
- hair follicles
- melanin

2025

2024

موقع المناهج  
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