نماذج تدريبية للصف الثالث الثانوي

الأحياء باللغة الإنجليزية

النموذج (1)

2026-2025

أولاً : الأسئلة الموضوعية (اختيار من متعدد) "كل سؤال من درجة واحدة"

1 Which one of the following bones HAS NO cavity (depression) into which the head of another bone fits?

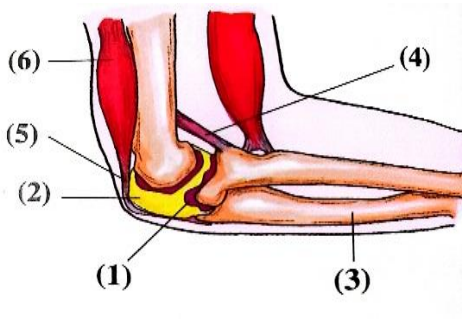
A) Ulna

B) Radius

C) Scapula

D) Pelvis

2 The opposite figure represents the elbow joint.



Which structures shown in the figure are characterized by a degree of elasticity and ability to increase in length?

A) 2

B) 4

C) 5

D) 3

3 **Which of the following is NOT correct about total movement?**

A) Helps living organism to look for its food

B) Performed by all living organisms

C) Helps living organism to escape from dangers

D) Performed by some unicellular organisms

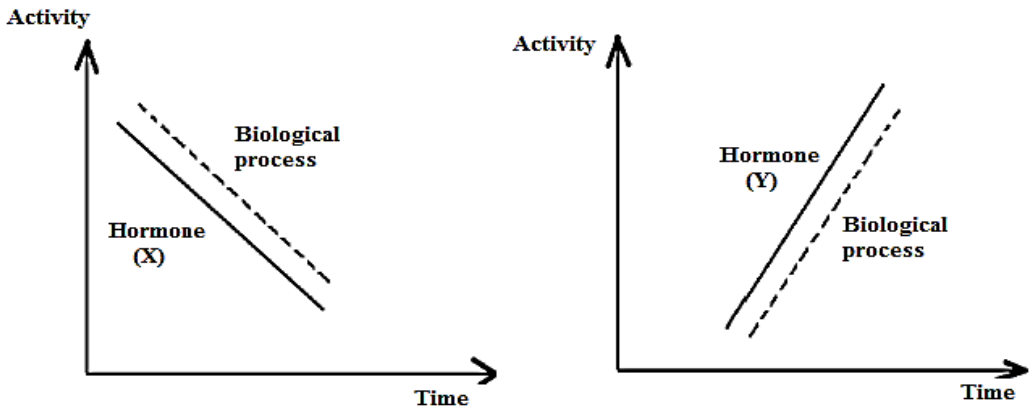
4 **In skeletal muscles, nuclei are normally found:**

A) In the center of the muscle fiber

B) In the middle of the sarcomere

C) Close to sarcolemma

D) Adjacent to myosin filaments



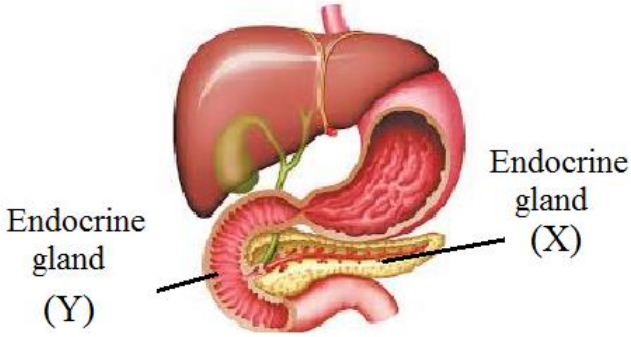
5 **The diagram illustrates the effects of X and Y hormones on biological processes. From the diagram, we conclude that:**

A) Both X and Y are activators

B) Both X and Y are inhibitors

C) X is an inhibitor, Y is an activator

D) X is an activator, Y is an inhibitor



6 From the diagram, which of the following is true about endocrine glands X and Y?

A) X hormones affect the liver, and Y hormones affect the exocrine part of gland X.

B) X hormones affect the liver, and Y hormones affect the endocrine part of gland X.

C) X and Y hormones affect endocrine glands.

D) X and Y hormones affect exocrine glands.

7 **When urine concentration decreases in an abnormal way:**

A) ADH secretion increases

B) ADH secretion decreases

C) Aldosterone secretion increases

D) Aldosterone secretion decreases

8 **What is the similarity between the reproduction of amoeba under unsuitable conditions and reproduction of plasmodium inside red blood cells?**

A) Each of their cells are 2N

B) Each of their cells are surrounded by a thick coat

C) The number of divisions before liberation of the produced cells

D) The type of division used in reproduction

9 **The sexual reproduction has unique characteristics, from which :**

A) The Presence of male and female gametes

B) Doesn't pass through mitotic division

C) Occurs in higher plants and animals only

D) Must pass through meiotic division

10 **Which of the following accurately represents the correct sequence of steps of sexual reproduction in bean plant?**

A) Pollination - Fertilization - Seed Formation

B) Seed Formation - Pollination - Fertilization

C) Fertilization - Pollination - Fruit Formation

D) Embryo Formation - Fertilization - Pollination

11 **What is the function of the fruit in flowering plants?**

A) Protection of seeds and helping their dispersal.

B) Attraction of insects for pollination.

C) Formation of ovules and fertilization.

D) Production of food for the plant seed embryos.

12 **What is the main reason for the scrotum being located outside the body cavity?**

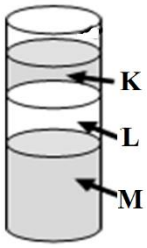
A) Increasing the activity of the seminiferous tubules

B) Increasing the activity of the epididymis

C) Increasing the secretion of interstitial cells

D) Facilitating the sperm exiting from the body

13 **To separate sperms containing the X chromosome, the higher in molecular weight, from that containing Y chromosome, centrifugation is used. The denser sperms will be in the lower layers, while the less dense sperms will be in the upper layers. Study the figure and answer:**
Which of the following layers can be used to produce only males at a high rate?



A) K

B) L

C) Both K & M

D) Both K & L

14 **In structural and biochemical immunity, plants produce substances that limit the reproduction and growth of bacteria which are……. in order:**

A) Cellulose and detoxifying enzymes

B) Subrin and receptors

C) Receptors and cellulose

D) Cutin and phenols

15 **Which of the following is <u>NOT</u> a component of the immune system?**

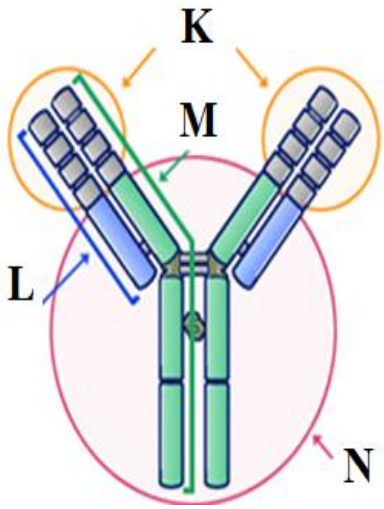
A) Red blood cells

B) Spleen

C) White blood cells.

D) Tonsils.

16 **The opposite figure represents a typical antibody. Which of the following is constant in shape and structure in all antibodies?**



A) K

B) M

C) L

D) N

17 **What is the difference between innate and adaptive immune responses?**

A) The adaptive immune system is more rapid in its response than the innate immune system.

B) The adaptive immune system produces a longer-lasting defense than the innate immune system.

C) The innate immune system produces a more specific defense than the adaptive immune system.

D) The innate immune system produces memory cells that are not produced by the adaptive immune system.

18 **What is the importance of the presence of complementary sequence of nitrogenous bases in the two strands of DNA?**

A) It allows the two ends of the molecule to join to each other.

B) It allows each strand to act as a template for the construction of a new strand.

C) It gives the sugar-phosphate backbones their antiparallel orientation.

D) It increase the genetics diversity.

19 **The lagging strand is characterized from the leading strand by the presence of Okazaki fragments. What is the reason of formation of Okazaki fragments?**

A) Because the polymerase enzyme only acts in the 3' → 5' direction on the new strand.

B) Because the polymerase enzyme cannot start synthesizing a new strand without a primer.

C) Because the two template strands are antiparallel.

D) Because helicase enzyme separates the two strands of DNA in one direction only.

20 **What is the importance of the presence of a nuclear membrane around DNA in eukaryotes?**

A) Protecting genetic material and making transcription processes precisely.

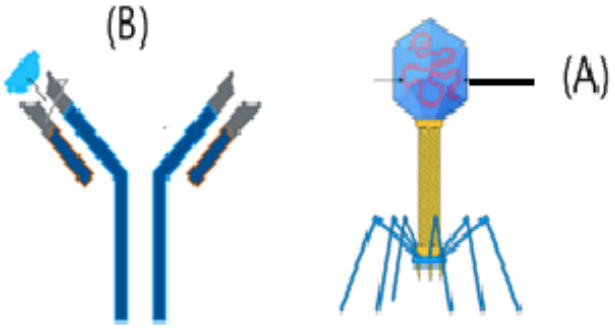
B) Facilitating gene transfer to neighboring cells.

C) Allowing the random increase in the number of chromosomes.

D) Enhancing the complexity of DNA by binding it to histone proteins.

21 **From the opposite diagram:**

Which of the following statements is correct about proteins labeled (A) and (B)?



A) Both are regulatory proteins involved in specific reactions.

B) Both are structural proteins involved in building of the living organism.

C) Protein (A) is structural and (B) is regulatory.

D) Protein (A) is regulatory and (B) is structural.

22 **If we assume that a cell loses the ability to produce uracil but can still produce thymine normally, which biological process will be directly affected?**

A) DNA replication.

B) Transcription.

C) Translation.

D) Genetic mutation repair.

23 **What is the most important factor for a successful ligation of a gene to a plasmid after the cutting process in the recombinant DNA production experiment?**

A) Plasmid length.

B) Restriction enzyme activity.

C) Complementarity of the sticky ends.

D) Type of bacteria used.

24 **Three different scientists, each of them specializing in one of the following branches of geology (geophysics, geochemistry, mineralogy, and crystallography), met to undertake...**

A) Search for coal in the Eastern Desert

B) Exploring for platinum near to the south borders

C) Constructing an industrial facility near the Qattara Depression

D) Drilling groundwater wells near the New Valley

25 **Which of the following Earth's layers is found in a solid state, but due to extremely high temperature and pressure behaves plastically and allows slow flow?**

A) Inner core

B) Outer core

C) Asthenosphere

D) Oceanic crust

26 **A rock sample contains two parallel sandstone layers separated by a thin basalt layer. Which statement correctly describes the relationship between the sandstone layers?**

A) Angular unconformity

B) Disconformity

C) Nonconformity

D) Sedimentary Conformable

27 **The mineral whose chemical structure is silicon dioxide (SiO_2) is characterized by:**

A) Constant color

B) Belonging to the oxides

C) Metal luster

D) Has no weak bonding levels

28 **A cube of halite (sodium chloride) belongs to the cubic crystal system, while a crystal of calcite (calcium carbonate) is a hexagonal prism, which belongs to the hexagonal system. Which of the following factors had the greatest influence in determining the different crystal systems for each.**

A) The temperature during crystallization

B) The type of chemical elements that make up the mineral only

C) The internal atomic structure and the arrangement of the structural units

D) The pressure exerted on the magma during crystallization

29 **A shiny mineral specimen with a metallic luster, exhibits perfect cubic cleavage, and has a very high specific gravity. Which mineral most closely matches these properties?**

A) Graphite

B) Magnetite

C) Galena

D) Calcite

30 **In a mountainous area, a rock sequence was observed consisting of:**

(1) Granitic rocks at depth,

(2) Directly above them, metamorphic rocks such as gneiss and schist,

(3) And at the top, horizontal layers of sandstone and limestone containing fossils.

Which of the following sequences best represents the correct geological evolution of this area according to the rock cycle?

A) Magma cooling → Sedimentation → Metamorphism

B) Sedimentation → Metamorphism →rock Melting

C) Metamorphism →Magma cooling → Sedimentation

D) Metamorphism → Sedimentation → rock Melting

31 **When potassium-rich magma intrudes and crystallizes between sedimentary rock layers, it forms a rock that is:**

A) Acidic intrusive and massive metamorphic

B) Acidic volcanic and foliated metamorphic

C) Lithified sedimentary and basic igneous

D) Fine-grained sedimentary and ultrabasic igneous

32 **The sedimentary rock composed of a single mineral and showing rhombohedral cleavage is:**

A) Limestone

B) Sandstone

C) Flint

D) Gypsum

ثانياً : الأسئلة الموضوعية (الاختيار من متعدد) " كل سؤال من درجتين "

33 **Body position changed automatically when losing balance depending on:**

A) A nervous muscular reflex action.

B) A muscular skeletal reflex action.

C) A skeletal muscular reflex action.

D) Reflex action and expansion of ligaments

34 **Which of the following causes delays in mental and sexual development?**

A) Decrease of TSH in childhood

B) Decrease of thyroxin in adults

C) Excess of TSH in childhood

D) Excess of thyroxin in adults

35 **Mature pollen grain contains**

A) One nucleus

B) Two nuclei.

C) Three nuclei.

D) Four nuclei

36 **Which of the following characterizes all monocot seeds from dicot seeds?**

A) Ovules wall harden to form testa

B) Has one cotyledon that stores most endosperm

C) The ovary wall swells and forms the fruit

D) The integuments of the ovule are fused with the ovary wall

37 **The second meiosis occurs during egg formation only when:**

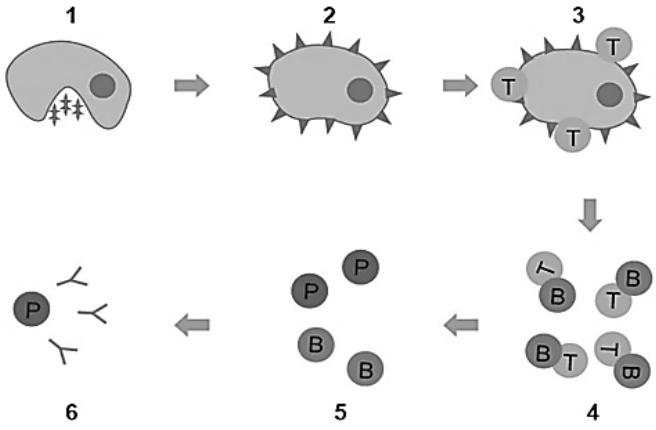
A) Fertilization occurs by the sperm.

B) The sperm succeed in penetrating the ovule.

C) The egg is released from the ovary.

D) The ovulation phase of the menstrual cycle begins.

38 In the opposite figure, cell number (1) may be :



A) Mature B- cell

B) Helper T- cell

C) Plasma B lymphocytes.

D) Macrophage

39 **Which of the following lymphoid organs plays a main role in the maturation of acquired immunity cells?**

A) Tonsils.

B) Payer's patches.

C) Thymus gland.

D) Spleen

40 **What property protects the DNA terminals in prokaryotes?**

A) It contains telomeres (satellite DNA).

B) Its two ends are joined to each other.

C) It is complexed with histone proteins.

D) It contains promoters at the beginning of each gene.

41 A person was exposed to X-rays for a long time, and some of his body cells began to divide abnormally.

Which of the following statements is correct about the effect of this rays?

A) Activates cell division.

B) Affects proteins of the nucleic acid duplication

C) Causes gene mutations.

D) Causes duplication of genetic material within the cell.

42 **What is the characteristic of transfer RNA?**

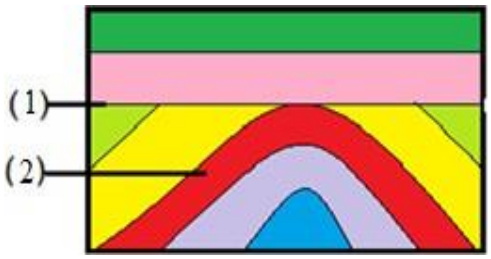
A) Carries anticodons for several types of amino acids.

B) Degrades immediately after transferring the amino acid to the ribosome

C) Transfers the same amino acid to the ribosome several times.

D) Complicated with proteins after transcription to maintain a specific structure.

43 **What geological structures are indicated by numbers (1) and (2)?**



A) (1) Normal fault, (2) nonconformity

B) (1) Reverse fault, (2) Angular unconformity

C) (1) disconformity, (2) Syncline fold

D) (1) Angular unconformity, (2) Anticline fold

44 **When an old volcano erupts, which of the following may resulted from old igneous rocks?**

A) Volcanic breccia

B) Volcanic bombs

C) Batholith

D) Laccolith

ثالثاً: الأسئلة المقالية " كل سؤال من درجتين "

45

a) The pollen grain passes through two mitosis cell divisions, in two different places. Determine these two places and the importance of each of them

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b) illustrate the importance of reduction of number of resulting cells from meiosis division during ovule formation in flowering plant .

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46

If you know that codons of Valine amino acid are:

1 2 3
GUA, GUG, GUC, GUU

Illustrate the following:

a) **Why the third nitrogenous base is the least effective one at occurrence of bases replacing mutation ?**

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b) **What is the importance of this for the living organism?**

إنتهت الأسئلة