

نماذج تدريبية للصف الثالث الثانوي
الاحياء باللغة الإنجليزية
(النموذج 7)

2025 - 2026

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

1

Which of the following are similar in function to suberin and cutin?

- A) Both give the plant flexibility and strength
- B) Both prevent water from penetrating through cell walls
- C) Both are found in collenchyma tissue
- D) Both are composed of simple chemical compounds

2

In the knee joint, which of the following is directly affected if a fracture of the fibula head occurs?

- A) Posterior cruciate ligament movement
- B) Anterior cruciate ligament movement
- C) Lateral ligament movement
- D) Medial ligament movement

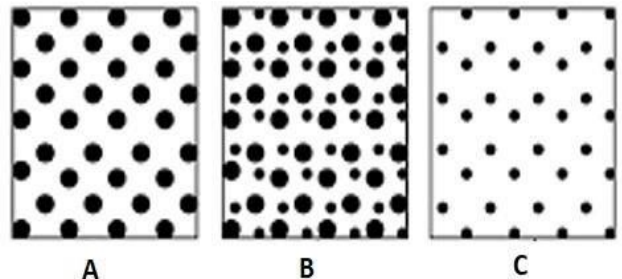
3

The muscles of the blood vessel walls share with the thigh muscle the presence of:

- A) Sarcomere
- B) Sarcoplasm
- C) **Light band**
- D) **Semi- Light band**

4

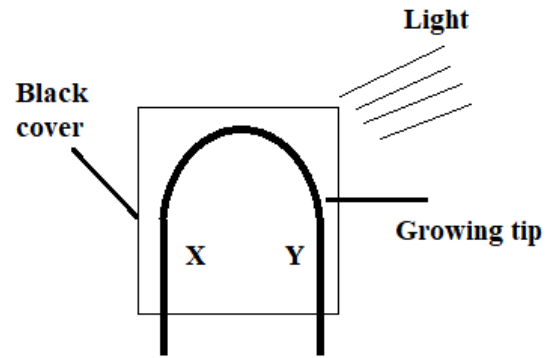
Which of the following section in the myofibril DOESN'T need calcium ions during contraction?



- A) A only
- B) B only
- C) C only
- D) Both A and C

5

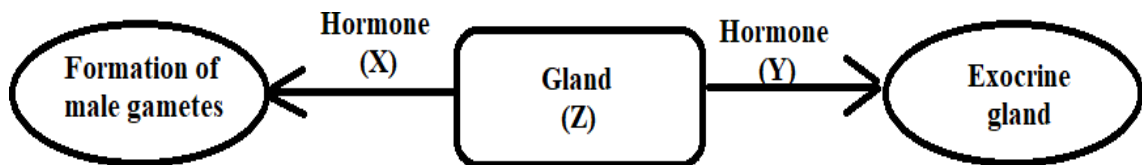
In the opposite figure, what happens if side (X) is injected with indole acetic acid and then the light is blocked out?



- A) It binds towards side (X)
- B) It binds towards side (Y)
- C) It does not bind because the light is equal on both sides
- D) It does not bind because no auxins are formed

6

Study the following diagram which represents the function of a gland.



Which of the following is correct about the hormones (X) and (Y)?

	(X hormone)	(Y hormone)	
A)	LH	TSH	أ
B)	Testosterone	LH	ب
C)	FSH	Prolactin	ج
D)	Androsterones	Oxytocin	د

7

A person has difficulty digesting fats despite medical tests showing their pancreas is healthy. Which of the following could be the cause of this problem?

- A) Decrease of secretin hormone
- B) Decrease of thyroxin hormone
- C) Decrease of insulin hormone
- D) Decrease of cholecystokinin hormone

8

Which of the following causes differences in reproductive capacities among mammals?

- A) Number of menstrual cycles per year
- B) Diversity of food sources
- C) Difference in surrounding environments
- D) Increased number of females than males

9

Which of the following may produces individuals that are genetically incompatible with the mother?

- A) Fertilized honey bee insect eggs
- B) Unfertilized aphid eggs
- C) Starfish eggs exposed to radiation
- D) Frog eggs exposed to heat shock

10

Which of the following distinguishes reproduction by conjugation from reproduction by gamete?

- A) The formation of a single cell resulting from the fusion of nuclei
- B) The formation of a diploid cell that does not divide directly
- C) The formation of a diploid cell that divides directly
- D) The formation of a diploid cell to produce two new individuals

11

When does a pollen grain become capable of double fertilization?

- A) After the formation of the pollen tube
- B) After the division of the microspore cell nucleus
- C) After the division of the generative nucleus
- D) After the formation of thick wall

12

Which of the following distinguishes male gametes from female gametes in humans?

- A) Contain a greater number of chromosomes.
- B) The number of gamete cells produced by meiosis is greater
- C) Presence of stored food.
- D) They are haploid

13

Which of the following statements expresses the relationship between hormones of the anterior lobe of pituitary gland and hormones from the ovaries?

- A) Increased levels of ovarian hormones increase the levels of FSH and LH.
- B) Increased levels of FSH and LH decrease the levels of ovarian hormones.
- C) Decreased levels of FSH and LH increase the levels of ovarian hormones.
- D) Decreased levels of ovarian hormones increase the levels of FSH and LH.

14

When a branch of a plant is infected, a layer of cork is formed around the infected area.

What is the primary role of this layer?

- A) Secretion of toxic substances to kill the pathogen directly.
- B) Prevent the entry of pathogens to healthy tissues.
- C) Swelling of the cell walls of epidermal and subepidermal cells.
- D) Kill the cells around the site of infection.

15

Which of the following cell types is affected by the accumulation of senescent cells in the body?

- A) Macrophages
- B) Eosinophils
- C) Basophils
- D) Neutrophils

16

Which of these cells relies primarily on its internal lytic (digestive) enzymes to quickly inside it to eliminate and clear the pathogen?

- A) B cells
- B) T cells
- C) Neutrophils
- D) Mast cells

17

When blood types are determined, an interaction occurs between the antigens on the surface of red blood cells and the antibodies used. Which mechanism of action of the antibodies is responsible for this reaction?

- A) Anti- toxins
- B) Agglutination
- C) Neutralization
- D) Lysis

18

In DNA hybridization technology, when separating two DNA strands, one sample may require a higher temperature than another, even if they are equal in length and number of nucleotides. This is because:

- A) It contains less number of nucleotides.
- B) It contains a higher percentage of thymine and adenine bases.
- C) It contains a higher percentage of cytosine and guanine bases.
- D) It contains more histone proteins.

19 Which of the following can be easily repaired by the DNA ligase enzyme?

- A) Destruction of a pyrimidine (T) base and an adjacent purine (G) base in a strand of DNA molecule
- B) Destruction of the two complementary bases T and A at the same site in a double-stranded DNA molecule
- C) Damage to a purine (G) base in a single-stranded DNA molecule
- D) Damage of hydrogen the bonds between different bases in a DNA molecule

20 All of the following are roles of non-coding regions of DNA except:

- A) Regulating transcription through promoters regions
- B) It helps maintain the structure of chromosomes
- C) It produces proteins that stimulate cell division.
- D) Containing repeating sequences that contribute to chromosome stability and protection

21 What of the following distinguishes RNA polymerase enzyme from DNA polymerase enzyme?

- A) The types of purines in the new strand nucleotides.
- B) The direction of new nucleotides addition.
- C) The type of sugar in the new nucleotides.
- D) The presence of more than one type of enzyme in prokaryotes.

22

If the codon GAA changes to the codon GAG, and the resulting amino acid remains unchanged, what can you conclude?

- A) The genetic code is accurate and does not tolerate errors.
- B) The new codon completely changes the protein's structure.
- C) There can be more than one code for a single amino acid.
- D) Any change in the bases stops the translation process.

23

When comparing cells from different tissues of the same organism, we find that they all contain the same amount of DNA but produce different proteins. What explains this?

- A) Mutations in some cells produce a different protein.
- B) Each cell uses different parts of its DNA to synthesize specific proteins.
- C) The types of amino acids present in each cell is different.
- D) The genes activity present on the DNA differ from one cell to another

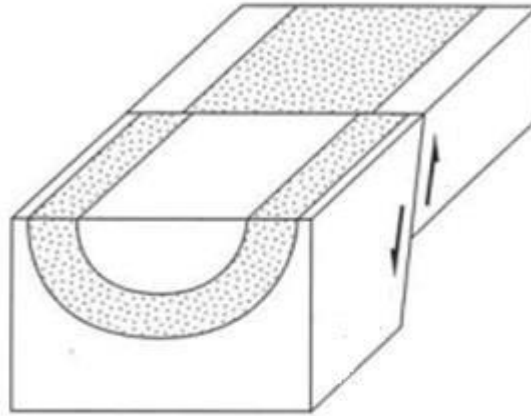
24

Scientists have explained the physical state of the Earth's outer core through the analysis of:

- A) The path of seismic waves
- B) Samples of igneous rocks
- C) Satellite images of the Earth's center
- D) Lava flows from volcanic eruptions

25

In the following figure, arrange the geological events from oldest to most recent:



- A) Compressive forces, then another compressive force, followed by erosion
- B) Tensional forces, then only compressive forces
- C) Compressive forces, then tensional forces, followed by erosion
- D) Tensional forces, then only tensional forces

26

The metal that crystallizes in all stages of magma crystallization is used in the manufacture of:

- A) Ceramics
- B) Iron
- C) Glass
- D) Cement

27

Carbon is found in all of the following except:

- A) Gypsum
- B) Diamond
- C) Graphite
- D) Malachite

28

A mineral sample exhibits cleavage in three directions perpendicular to each other, producing small cubes. When scratched, its powder turns black. Which of the following minerals is most likely?

- A) Quartz
- B) Galena
- C) Hematite
- D) Calcite

29

Which of the following conditions leads to the formation of glassy-textured igneous rocks?

- A) Crystallization of minerals over a long period
- B) Very rapid cooling of lava at the Earth's surface.
- C) Slow cooling of magma at depth.
- D) Increased pressure on magma at the surface.

30

A metamorphic granite rock sample with a foliated texture was analyzed.

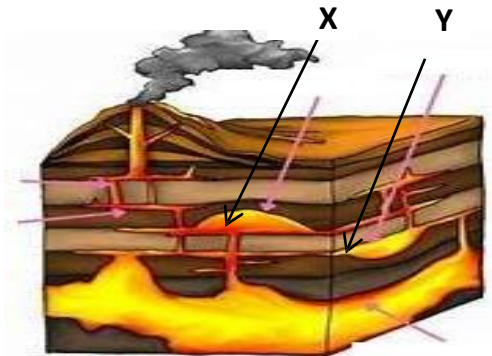
Which of the following conditions is most likely to have formed this sample?

- A) It was subjected to very high pressure and temperature during violent tectonic movements.
- B) It was subjected to very high pressure, leads to partial melting and recrystallization.
- C) It formed from the solidification of magma under conditions of rapid cooling on the Earth's surface.
- D) It was deposited on an ocean floor and then subjected to pressure only.

31

Study the adjacent figure, which illustrates the shapes of subsurface igneous rocks, and then identify the two shapes (X) and (Y):

- A) (X) Laccolith and (Y) Lopolith.
- B) (X) Dykes and (Y) Sills.
- C) (X) Sills and (Y) Dykes.
- D) (X) Lopolith and (Y) Laccolith



32

A rock sample composed of well-rounded, uniformly (well –sorted) sized quartz grains, compacted by silicate cohesion. Which of the following statements is most accurate in identifying the origin and type of this rock?

- A) A clastic rock of the conglomerate group, formed in a fluvial environment.
- B) A clastic rock of the sandstone group, formed in a desert environment.
- C) A chemically formed rock, formed from the evaporation of aqueous solutions.
- D) An organically formed rock of carbonates, formed in a shallow marine environment

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

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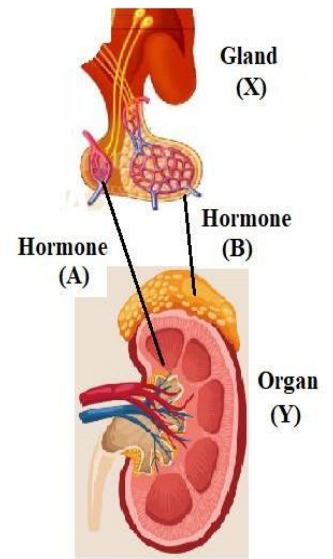
Which of the following is NOT related to the occurrence of muscle spasm?

- A) Speed of contraction and relaxation
- B) Number of myofibrils
- C) Number of ATP molecules in the muscle
- D) Percentage of Oxygen in the muscle

34

The diagram in front of you illustrates the relationship between gland (X) and organ (Y). What role does hormone (B) play?

- A) It has a direct effect on the body's internal balance.
- B) It indirectly contributes to the body's internal balance.
- C) It lowers blood pressure.
- D) It antagonizes the action of hormone (A).



35

In which of the following stages of spermatogenesis is the part responsible for sperm penetration of the secondary oocyte wall be formed?

- A) During the multiplication stage
- B) During the growth stage
- C) During the maturation stage
- D) During the metamorphosis stage

36

If you know that the process of fertilization and embryo formation in humans is a complex process that takes place in several stages, during which of the following stages is the sex of the embryo determined?

- A) Penetration of the secondary oocyte by a sperm
- B) Fusion of the sperm nucleus with the mature ovum nucleus
- C) Second meiosis of the secondary oocyte nucleus
- D) Division of the zygote by mitosis

37

An ultrasound scan of a pregnant woman shows the fetus as illustrated in the image.

What is the likely probable result regarding the sex of the fetus if you know that the genital organs have not yet differentiated, even though the fetus is 8 weeks old?



- A) A male with a fully developed skeleton.
- B) A female whose genital organs have been differentiated.
- C) A female whose genital organs will differentiate after four weeks.
- D) A male whose genitalia will differentiate after four weeks

38

Which of the following does NOT occur during the inflammatory response?

- A) Secretion of inflammatory substances
- B) Repair of damaged tissues
- C) Increased blood vessels permeability
- D) Permeability the neutrophils and monocytes into inflamated tissues

39

Which of the following immune responses represent a rapid responses to a pathogen?

- A) Inflammatory response – secondary immune response.
- B) Primary immune response - the inflammatory response
- C) Interferon immune response – the primary immune response.
- D) Primary immune response – secondary immune response.

40

Which of the following is the primary cause of Klinefelter syndrome and Turner syndrome in humans?

- A) Non-separation of chromatids after centromere cleavage
- B) A defect that leads to a change in the sequence of some genes when a person is exposed to radiation
- C) A defect during the maturation stage of the egg or sperm formation.
- D) A defect during the development stage of the egg or sperm formation

41

Which of the following is NOT a possible consequence of a chromosome break?

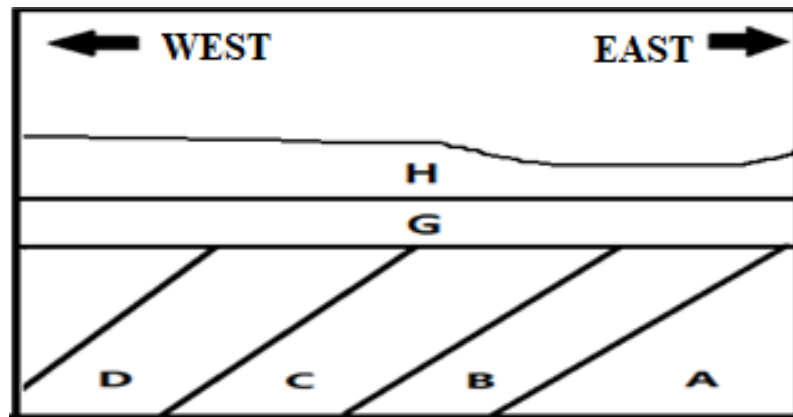
- A) Loss of part of the genetic material, leading to abnormalities in some traits.
- B) Reattachment of the fragment in the wrong place, causing a chromosomal mutation.
- C) Reversal of the broken fragment and its subsequent reattachment.
- D) An increase in the number of genes on the chromosome, leading to duplication of their activity.

42

Is it possible to join a strand of DNA to a strand of RNA through hybridization?

- A) Yes, because their nucleotides are complementary.
- B) Yes, due to the presence of some complementary nucleotides.
- C) No, because they have different five-carbon sugars.
- D) No, because they have different nitrogenous bases.

43



A geologist discovered inclined sedimentary layers in a mountainous region. He drew the above diagram and, by measuring the geological age of the layers, found the following:

- Layer (D) is 30 million years old,
- Layer (A) is 70 million years old.

Based on the above, which of the following represents the expected geological structures?

- A) An anticline fold and angular unconformity
- B) A syncline fold and nonconformity
- C) An anticline fold and nonconformity
- D) A syncline fold and a strike slip fault

44

The variation in the dip of sedimentary layers resulting from periods of depositional activity without erosion and without exposure to internal factors is considered:

- A) Cross bedding
- B) Angular unconformity surface
- C) Low Sloping thrust fault
- D) Reverse fault

ثُلُثَبْ: الأسئلة المقالية . كل سؤال بدرجتين

45

A) A woman gave birth to twins (two boys and two girls).

What is the highest and lowest number of eggs that could have produced these children?

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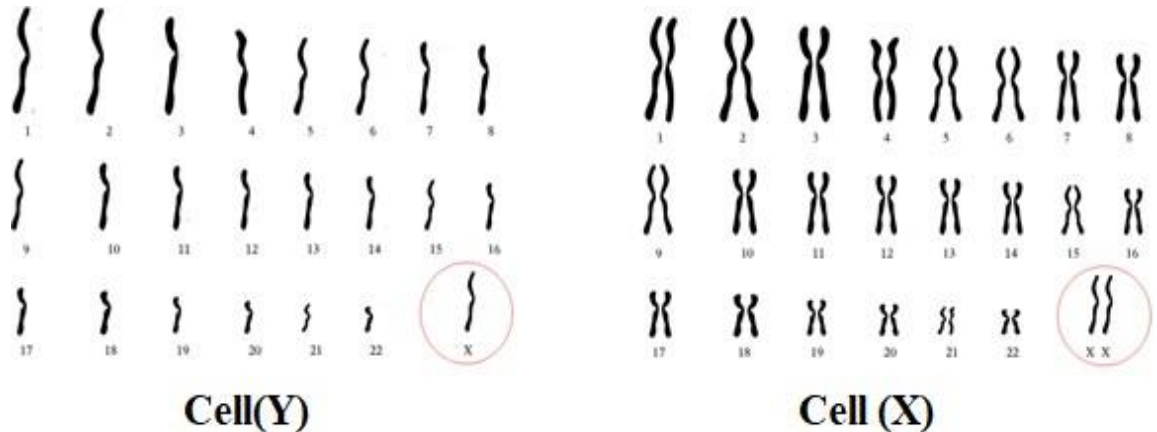
B) What does indicates the difference in the timing of genital differentiation in a woman pregnant with twins?

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46



A) The diagram before you represents the karyotype of two cells (X) and (Y) in human, study it and then determine the type of each cell (X) and cell (Y):

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B) The ratio between the number of genes in (x) and the number of genes in (y), respectively

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انتهت الأسئلة