نماذج تدريبية للصف الثالث الثانوي

الأحياء باللغة الإنجليزية

النموذج (2)

2026-2025

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

1 **The 12th vertebra of the vertebral column, all its processes articulate with other bones EXCEPT :**

A) The superior articulating process

B) The neural spine

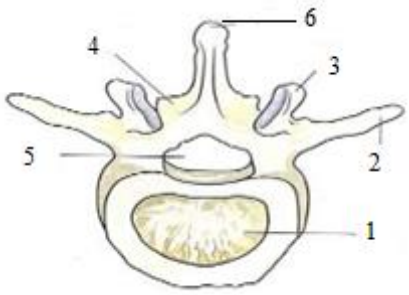
C) The transverse process

D) The inferior articulating process

2 **The opposite figure represents a vertebra.**

Through which one of these structures

a part of the central nervous system passes?



A) 2

B) 3

C) 4

D) 5

3 **All of the following is correct about the positional motion EXCEPT:**

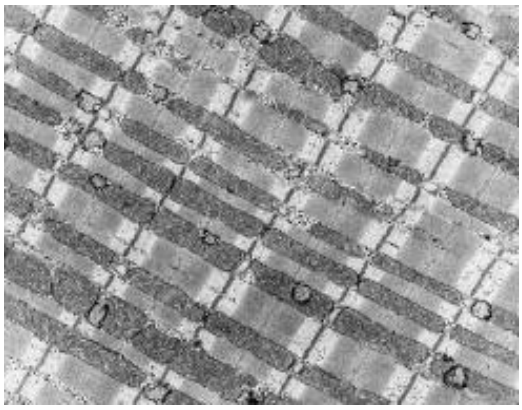
A) It has a role in digestion process

B) The movement of plastids indicates to its occurrence.

C) Phototropism and pull movement in plants are examples for it

D) Performed by most living organisms.

4 **The skeletal muscle appears striated under the microscope due to :**



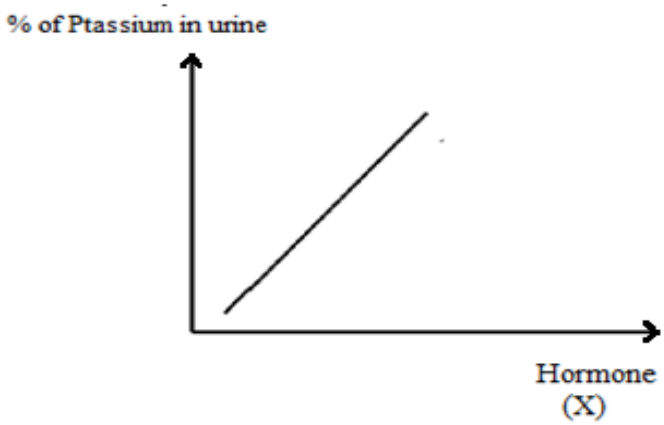
A) Presence of alternating dark and light bands

B) Presence of vertical protein filaments

C) Presence of horizontal protein filaments

D) Presence of spaces between muscle fibers

5 **From the provided graph,**



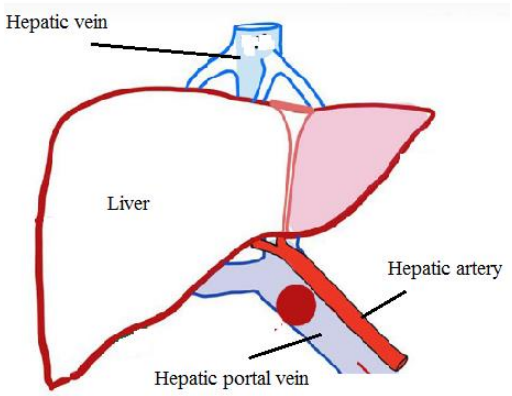
Which of the following hormones does hormone X represent?

A) Aldosterone

B) Calcitonin

C) Parathormone

D) ADH



6 **Which gland or glands are responsible for increasing glucose levels in both the liver and the hepatic portal vein?**

A) Thyroid only

B) Pancreas only

C) Thyroid and pancreas

D) Stomach and small intestine

7 **Which of the following happens when thyroxin levels in the blood increases?**

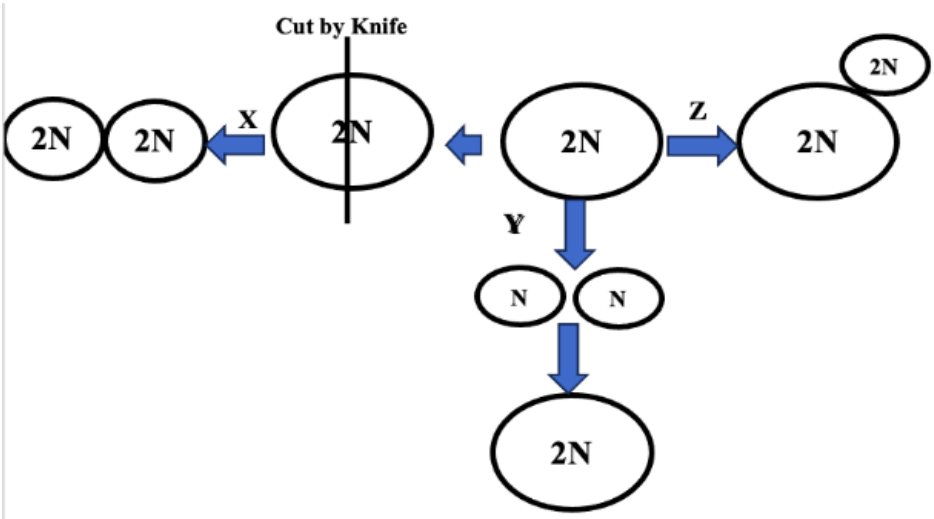
A) Obesity

B) Activation of the adenohypophysis of the pituitary

C) Inhibition of TSH secretion

D) Muscle spasms

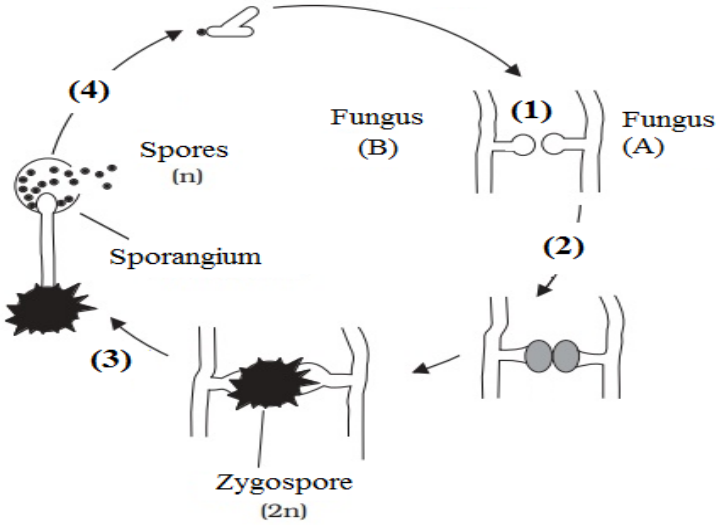
8 **The diagram shows the types of reproduction of a living organism, and the vital processes it uses. study it then answer:**



Which of the following represents this living organism and the vital processes it uses?

	Living organism	Vital process		
		X	Y	Z
A	Yeast	Regeneration	Meiosis	Budding
B	Hydra	Regeneration	Meiosis	Budding
C	Carrot plant	Tissue cultures	Fertilization	Artificial parthenogenesis
D	Plasmodium	Fragmentation	Fertilization	Sporogony

9 **The following diagram shows the life cycle of bread mould under different environmental conditions**



Which of the following represents the numbers indicated by numbers from (1) to (4) respectively?

A) Mitosis- asexual reproduction- meiosis - sexual reproduction

B) Sexual reproduction- asexual reproduction- zygote formation- mitosis

C) Asexual reproduction- sexual reproduction- meiosis - meiosis then mitosis

D) Sexual reproduction- zygote formation- meiosis then mitosis - mitosis

10 **When a pollen grain transfers from anther of a flower to stigma of another plant flower of the same species, this process is called:**

A) Internal fertilization

B) Cross- pollination

C) Self-pollination

D) Vegetative propagation

11 **What is meant by a fruit in a flowering plant?**

A) One or more free or fused carpels

B) Fertilized ovum containing an embryo

C) The swollen base of the carpel

D) Mature ovary containing seeds

12 **What is the direct effect of blockage of the vas deferens?**

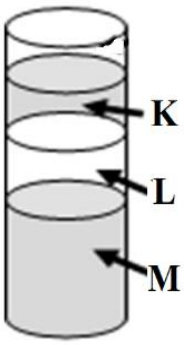
A) Sperms will not reach the epididymis

B) Increased sperm production

C) Sperm will not reach the urethra

D) Decreased production of the seminal fluid

13 To separate sperm containing the (X) chromosome (the higher in molecular weight), from that containing chromosome Y, 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 females at a high rate?



A) L

B) M

C) Both K & M

D) Both L & M

14 **Among the structural immune mechanisms that prevent the spread of pathogens within the plant are:**

A) Cork and suberin.

B) Tyloses and hyper sensitivity

C) Gums and insulating cover.

D) Suberin and swollen cell walls

15 **Which of the following cells mature after leaving the red bone marrow?**

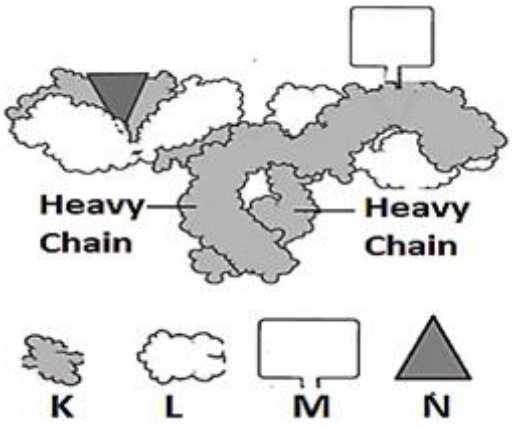
A) Mast cells

B) Eosinophils.

C) Natural killer cells

D) T-helper

16 **The opposite figure represents 3D structure of an antibody. Which of the parts lettered (K), (L), (M) and (N) represents the antigen?**



A) K

B) L

C) M

D) N

17 **What is the first type of white blood cells that attack the pathogens when they invade the body?**

A) Macrophages only

B) B-lymphocytes only

C) Macrophages and B-lymphocytes

D) Macrophages and helper T- cells

18 **What is the importance of the presence of weak hydrogen bonds between bases?**

A) They prevent gene mutations.

B) They ensure the accuracy of genetic information and facilitate the correction of any errors.

C) They facilitate separation of the two strands during transcription and replication.

D) They allow for the carrying of a large amount of genetic information.

19 **If a cell is treated with a chemical compound that inhibits ligase enzyme, which of the following is the most likely to happen in the produced cells?**

A) Accumulation of disconnected Okazaki fragments on the lagging strand.

B) Formation of shorter and more frequent Okazaki fragments than usual.

C) Increased mutation rate in the cell.

D) Elongation of the lagging strand is lower compared to the leading strand.

20 **A scientist analyzed a DNA sample and found that it contains histones and several genes with both coding and non-coding sequences.**

Which of the following organisms possess this sample?

A) Bacteria.

B) Poliovirus.

C) Yeast

D) Bacteriophages.

21 **What distinguishes insulin from histones?**

A) Produced from the transcription and translation of m-RNA.

B) Regulates the body's internal environment.

C) Contains peptide bonds.

D) Supports and protects cells

22 **Which of the following explains the reason why there is more than one type of RNA in a cell?**

A) Copied from different genes on DNA

B) Arrangement of nitrogen bases is different in each of them

C) One of them carries the genetic code permanently.

D) Each of them play a different role in protein synthesis

23 **If you want to insert a human gene into a bacterial plasmid, what is the first step?**

A) Cut the gene and plasmid with the same type of restriction enzyme.

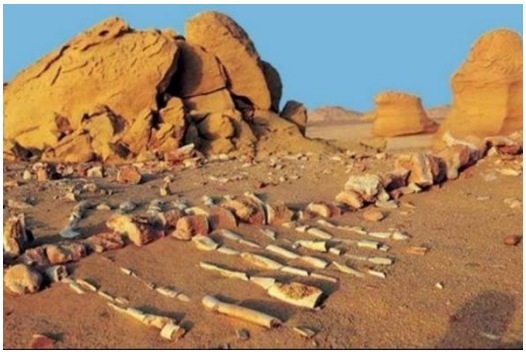
B) Heat the gene to separate the two strands of nucleic acids

C) Cut the gene and plasmid with two different types of restriction enzymes.

D) Use ligase enzyme to join the gene to the plasmid.

24 The image in front of you represents Wadi El-Hitan (Valley of the Whales) in Fayoum Governorate.

Which branch of geology does <u>not</u> rely on [to protect these skeletons?



A) Physical Geology

B) Paleontology

C) Structural Geology

D) Mineralogy and Crystallography

25 **which of the following statements is true when comparing continental crust and oceanic crust?**

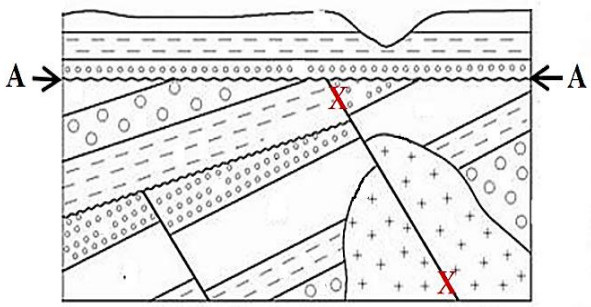
A) The oceanic crust is thinner but denser than the continental crust.

B) The continental crust is thicker and denser than the oceanic crust.

C) The continental crust is thinner and less dense than the oceanic crust.

D) The continental and oceanic crusts have equal thickness and density

26 **Study the opposite section, then deduce the types of geological .structures (A-A) and (X-X)**



A) (A-A) Disconformity – (X-X) Normal fault

B) (A-A) Angular unconformity – (X-X) Reverse fault

C) (A-A) Angular unconformity – (X-X) Normal fault

D) (A-A) Disconformity – (X-X) Reverse fault

27 **Which of the following minerals its chemical composition of lead sulfide?**

A) Galena

B) Dolomite

C) Barite

D) Magnetite

28 **A geologist analyzes two samples:**
- Sample (A) has three crystal axes of equal length and perpendicular to each other, and
- Sample (B) has three crystal axes of different lengths and perpendicular to each other.
What are the two possible crystal systems for the two samples, respectively?

A) The orthorhombic system (A) and the triclinic system (B).

B) The cubic system (A) and the orthorhombic system (B).

C) The hexagonal system (A) and the triclinic system (B).

D) The cubic system (A) and the tetragonal system (B).

29 **A mineral specimen with a vitreous, non-metallic luster that cleaves in three non-perpendicular directions to form a diamond-shaped structure. What is this mineral?**

A) Potassium feldspar

B) Pyrite

C) Calcite

D) Gypsum

30 **A sandstone rock (sedimentary) was buried deeply at a convergent plate boundary, where both temperature and pressure increased significantly**

What is the most probable path of the rock cycle this rock will follow afterward

A) It will melt directly to form granitic magma

B) It will become an igneous rock due to the high temperature

C) It will melt to form basaltic magma, then cool to form a basic igneous rock

D) It will transform into a metamorphic quartzite, and partial melting may produce magma

31 **A laccolith containing olivine and amphibole consists of the rock:**

A) Dolerite

B) Basalt

C) Peridotite

D) Microgranite

32 **- Sedimentary rock in which hydrocarbons are generated**

- Sedimentary rock in which hydrocarbons are stored and used in cement industry

From the previous it could be concluded that the are respectively sedimentary rocks:

A) Clastic – Chemical

B) Chemical – Biochemical

C) Clastic – Clastic

D) Chemical – Chemical

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

33 **In the elbow joint and when bending the arm, a coordination between opposite muscles occurs that affects movement of the joint.**

What is the part / component responsible for this coordination?

A) Opposite muscles

B) Ligaments

C) Joint

D) Nervous system

34 **When an increase in ACTH hormone and a decrease in cortisone secretion occur in the blood , this results from a malfunction in:**

A) Adrenal cortex

B) The glandular part of the pituitary gland

C) Adrenal cortex and the glandular part of the pituitary gland

D) Cortex and medulla of the adrenal gland

35 **The function of generative nucleus in the pollen grain is:**

A) Formation of the pollen tube

B) Production of the two male nuclei

C) Fusion with the egg cell

D) Fusion with the two embryo sac nuclei

36 **In dicotyledonous seeds, the two cotyledons work to:**

A) Store food needed for the embryo during germination.

B) Transport food from the ovary wall to the embryo.

C) Store food needed for the development of the zygote.

D) Store food needed for embryonic development and seed germination.

37 **The first meiotic division in human female ovary starts:**

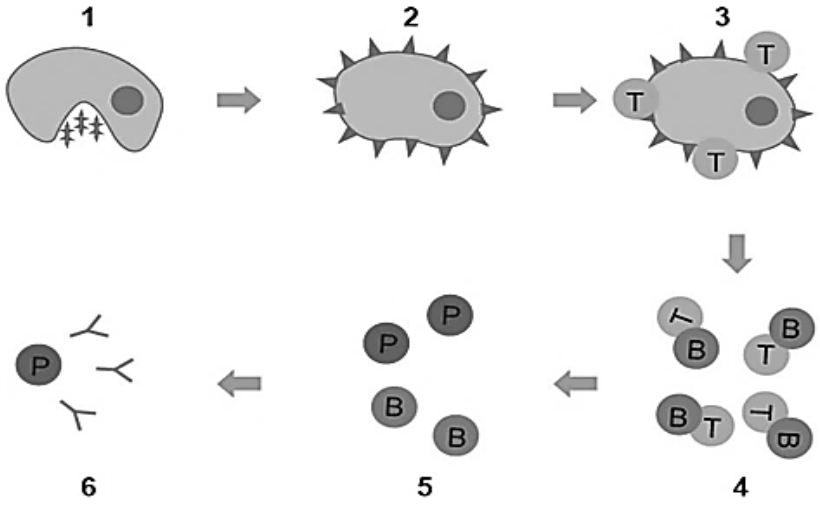
A) At puberty

B) During childhood

C) After birth

D) At fertilization

38



The figure illustrates the mechanism of humoral immunity.

What happens in step (4)?

A) T cells are preparing to release antibodies.

B) B cells produce large amounts of antibodies.

C) T cells are converted into activated T cells.

D) T cells release interleukins.

39 **When bacteria enter with inhaled air:**

A) Only the innate immune system is activated.

B) Only the acquired immune system is activated.

C) The acquired immune system is activated when the innate immune system fails.

D) Both immune systems are activated at approximately the same time.

40 **What is the importance of the presence of DNA in prokaryotes in a circular joined-end shape?**

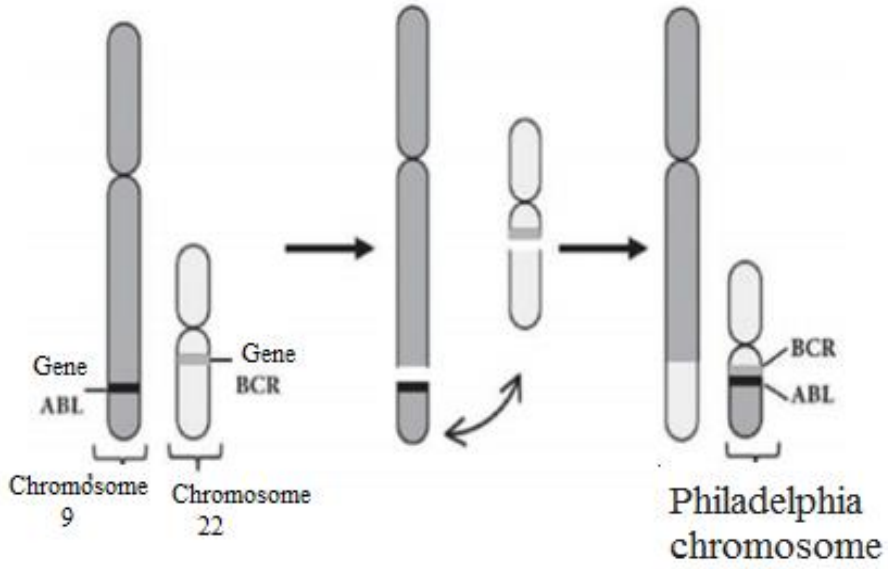
A) Due to absence of telomeres (satellite DNA).

B) To facilitate the binding of RNA transcription enzymes.

C) To facilitate the replication process before cell division.

D) To protect the DNA terminals from degradation in the cytoplasm.

41



The diagram illustrates one type of mutation known as the Philadelphia chromosome. What causes this mutation?

A) A segment of the chromosome separated and then rejoins after rotating 180°.

B) An exchange of segments between non-homologous chromosomes.

C) An addition of a segment to the chromosome.

D) A loss of a segment from the chromosome.

42

What distinguishes t-RNA from mRNA?

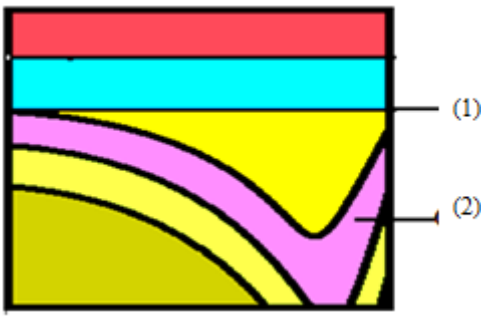
A) It carries the codons for amino acids.

B) It joins with the small ribosomal subunit.

C) It degrades during translation.

D) Is reused during the synthesis of the same polypeptide.

43 **The opposite diagram represents a vertical cross-section of a sedimentary sequence What are the geological structures with numbers (1) and (2) represent?**



A) (1) Anticline fold, (2) Nonconformity

B) (1) Syncline fold, (2) Angular unconformity

C) (1) Angular unconformity, (2) Syncline fold

D) (1) Disconformity, (2) Anticline fold

44 **An igneous rock extending about 250 km resulted from loss of sodium-rich magma heat slowly, it takes take the form of**

A) Granite batholith

B) Microgranite batholith

C) Granite dike

D) Microgranite dike

ثالثاً: الأسئلة المقالية " كل سؤال من درجتين "

45

Based on your study of the life cycle of the fern plant, answer the following:

a) What is type of cell division in the sori on the fern plant leaves and in the cells of gametophyte stage? What is the purpose in each case?

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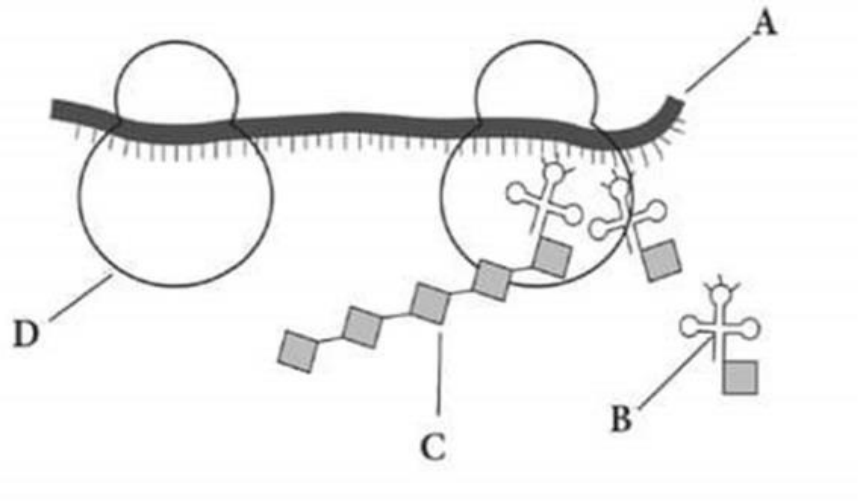
b) What is the main factor that affects the completion of asexual and sexual reproduction in the fern life cycle? Explain.

46

The following figure illustrates a vital process that occurs inside the cell and the structures lettered (A), (B), (C) and (D) which are involved in this process.



A) What is the process illustrated in the figure, and what is the role of the structure lettered (A) in this process?

B) What is the type of bonds between the structural units (monomers) of the structure lettered (C)? and which structure on the diagram is where these bonds are formed?

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إنتهت الأسئلة