

Biology

Time: 3 hours

( الإجابة في نفس كراسة الأسئلة )

( الدور الأول ٢٠٢٢ )

الأحياء بالإنجليزية

الأسئلة في عشرة صفحات

**The first group: from 1 to 9**

**1- Choose one of the two questions (a) or (b), then mention the scientific term that indicates it.**

a- A case that results due to the shortage of thyroxin hormone after puberty.

b- The body's ability to resist diseases.

**2- Choose one of the two questions (a) or (b), then correct underlined words:**

a -The amount of DNA in the unfertilized egg of a bee is twice the amount of DNA of a cell in the body of a male bee.

b- The bone marrow produces antibodies.

**3-Choose one of the two questions (a) or (b) then mention what are the cells resulting from cell division that occurs in the following cases:**

a - Secondary spermatocyte.

b- Secondary oocyte.

**4- State the chromosomal set of endosperm cells and the chromosomal set of microspores in the anther.**

**5- Choose the correct answer from the following:**

\_\_\_\_\_ is an examples of endosperm seeds .

a- wheat

b- apple

c- orange

d- beans

**6- What happens when?**

- The continuous increase of growth hormone after puberty.

**7- How true is the following statement?**

a- The internal membrane that surrounds the fetus plays a role in the formation of the placenta.

b- The egg is released on the first day of menstruation and is ready for fertilization within two days.

**8- Mention one function for each of the following structures:**

The structure	Function
a- Lymph nodes	_____
b- Tonsil	_____

**9- Mention the site of secretion of the hormone in the following cases:**

a- Hormone stimulating the formation of interstitial cells in the testicle.

b- The hormone that help in the absorption of carbohydrates from the small intestine.

**The second group: from 10 to 18**

**10- Choose one of the two questions (a) or (b), then mention the scientific term that indicates it:**

a- A membrane that surrounds the fetus and contains a fluid that protects the fetus from dryness and shocks.

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b- The process of ligation or cutting of the fallopian tubes in a woman.

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**11- Mention the name of the hormone that antagonize the action of Insulin hormone.**

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**12- Choose the correct answer from the following:**

**During the replication of the DNA molecule, the separation takes place between \_\_\_\_\_**

a- cytosine and guanine

b- adenine and uracil

c- thiamine and guanine

d- phosphate and deoxyribose

**13- Correct the underlined words:**

**Cortisone** hormone relaxes the pubic symphysis at the end of the pregnancy.

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**14 - Mention the name of the substance that is secreted from the suppressor T cells after the elimination of the microbe?**

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**15-choose the correct answer from the following:**

The hip joint is considered a \_\_\_\_\_ joint.

a-fibrous

b-cartilaginous

c- limited synovial

d- wide synovial

**16- Choose one of the two questions (a) or (b), then mention the scientific term that indicates it:**

a- A flat bone pointed from below, and its lower part is cartilaginous, and some ribs connect to it.

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b- A hormone secreted by the thymus gland.

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**17- Mention the means of the second line of defense that defend the body against pathogenic organisms.**

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**18- Give reasons for the following:**

Pearl breeders are keen to burn the sea stars they collect on the beach.

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**The third group: from 19 to 27**

**19- Choose one of the two questions (a) or (b), then write the scientific term:**

a- Structural immunity that represents the first bulwark that resist the plant against microbes..

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b- The plant gets rid of the pathogenic organism by killing the affected tissues to prevent the spread of the microbe to its healthy tissues.

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**20- Choose one of the two questions (a) or (b), then choose the correct answer:**

a- Bones are connected to each other at the joints by \_\_\_\_\_

a- ligaments

b- tendons

c - muscular tissue

d- nervous tissue

b-The leaves of the calyx and the stamens participate in the formation of a \_\_\_\_\_ fruit.

a- tomatoes

b- marrow.

c - strawberry

d - pomegranate

( بقية الأسئلة في الصفحة الخامسة )

21- Choose one of the two questions (a) or (b), then correct what is **underlined**:

a- If the number of purine nitrogen bases in a DNA molecule is 100 bases, then the number of turns of this molecule is 30.

b- The genetic material of placental mammals consists of seven types of nucleotides.

22- Mention one function for each of the following:

a- Interferons.

b- Micropyle of the flower.

23- How do you explain the following?

Viruses containing RNA mutated more than those containing DNA.

24- Correct the underlined words:

Aldosterone decreasing calcium ions in the blood.

25- Mention the characteristics of the endocrine glands.

**26- Give reasons for the following:**

Muscles need ATP during contraction and relaxation.

**27- In orang fruit.**

a- The pericarp of an orange arises from

b- The seed coat arises from

**Fourth group: from 28 to 36****28- Choose one of the two questions (a) or (b), then determine the chromosomal set of the following :**

a- The sperm of the honey bee males \_\_\_\_\_  
- the somatic cell of worker bees. \_\_\_\_\_

b- The corpus luteum cells \_\_\_\_\_  
- The polar body \_\_\_\_\_

**29- Correct the underlined words:**

If the ovum is not fertilized in the plant, the flower withers, and in humans, pregnancy occurs.

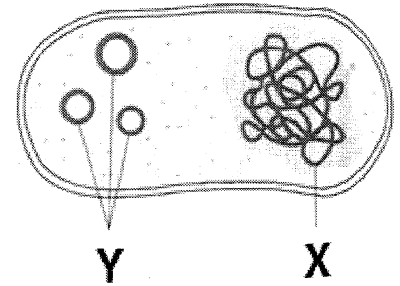
**30- Mention the scientific term indicating the following statement:**

- A structure that connects the human fetus to the placenta and through which digested nutrients and gases are transferred between them.

31- Choose the correct answer from the following: (score)

In the opposite figure, each of (X) and (Y) differ in \_\_\_\_\_

- a- the number of genes
- b- the number of terminal phosphate groups
- c- the type of nucleic acid.
- d-type of replication enzyme



32- The following table shows the ratios of nitrogenous bases in two samples (1) and (2) of DNA.

Calculate the ratio of nitrogenous bases

X= \_\_\_\_\_

Sample	adenine	guanine	thymine	cytosine
(1)	35%	15%	35%	X
(2)	Y	40%	15%	40%

Y = \_\_\_\_\_

33- Explain what happens in the following case?

The disappearance of natural killer cells from the human body.

34- Choose one of the two questions (a) or (b), then mention its importance to protect humans from diseases:

a- Sweating:

b- Hydrochloric acid in the stomach:

**35- Mention one function for each of the following:**

The structure	Function
a- The structural support	_____
b- The ribs	_____

**36 - Choose from the column (B) what fits to the column (A):**

(A)	(B)
1- The pubic symphysis ( )	a- It is a strong connective tissue that connects the gastrocnemius muscle to the heel bone
2- Achilles tendon. ( )	b- It form a wide movement joint with the humerus bone.
	c- It is the site where the two halves of the pelvic bones fuse from the ventral side

**Fifth group: from 37 to 45**

**37- Choose one of the two questions (a) or (b), then state the main reason for one of the following cases:**

a- A child with mental retardation, short body, large head and short neck.

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b- After conducting several tests on a human blood sample, an acute and continuous increase in potassium levels was observed.

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38- Choose from the column (B) what fits the column (A):

(A) The enzyme	(B) The function
1-DNA - helicase enzymes. 2-DNA-ligase enzyme.	a - It repairs DNA defects. b- It separates the DNA strands c- It hydrolysis DNA completely

1- (—————)

2-(—————)

39- Choose the correct answer from the following:

Myxodema is caused by \_\_\_\_\_

A- Growth hormone deficiency in childhood

B- Thyroxine deficiency in adult.

C- an increase in the adrenaline hormone in childhood

D- an increase in growth hormone after puberty.

40- Correct the underlined words:

Peyer's patches are located in the back of the mouth.

41- Give an example of a non-protein amino acid that acts as a protective substance for the plant .

42- Choose the correct answer from the following:

Sporozoites of malaria plasmodium are formed in .....

a- the patient blood .

b- human liver

c- salivary glands of the mosquito

d- the stomach wall of the mosquito

43- Choose one of the two questions (a) or (b), then mention the type of cell division and the name of the resulting cells in one of the following cases.

a- The spore of Polypodium.

b- Zygote of Polypodium.

44- What is meant by a secondary immune response?

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45- Determine the site of each of the following:

The structure	The site
a - Seminiferous tubules	<hr/> <hr/> <hr/>
b- Prostate gland	<hr/> <hr/> <hr/>

( انتهت الأسئلة )