امتحان شهادة إتمام الدراسة الثانوية العامة
للعام الدراسي 2018/2019 – الدور الثاني
المادة: الإحصاء (باللغة الإنجليزية)
التاريخ: 8/8/2018
زمن الإجابة: ثلاث ساعات
مجموع الدرجات: 60

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رقم الإجابة

رقم البند


تعليمات مهمة

- عدد أسئلة كرسة الامتحان (45) سؤال.
- عدد صفحات كرسة الامتحان (28) صفح.
- تأكد من ترقيم الأسئلة، ومن عدد صفحات كرسة الامتحان، فهي مسلولة.
- زمن الاختبار (ثلاث ساعات).
- الدرجة الكلية للاختبار (3) درجة.

عزيزي الطالب، أقرأ هذه التعليمات بعناية:
اقرأ التعليمات جيدًا سواء في مقدمة كرسة الامتحان أو مقدمة الأسئلة، وهي ضرورية لاجابة الأسئلة.
اقرأ السؤال بعناية، وفكري فيه جيدا قبل البدء في إجابته.
إن الأسئلة مترجمة للإيضاح، والمطلب الإجابة بلغة واحدة فقط عن كل سؤال.
استخدم الكلمات الأفق الأزرق للإجابة، والكلمات الرمادية في الرسومات، وعدم استخدام مزيج الكتابة.
لإجابة على الأسئلة المقالية، أجب في النسخة المخصصة للإجابة وفي حالة الحاجة لمساحة أخرى يمكن استكمال الإجابة في صفحات المسودة مرفقة بها إلى إجابتك بأكثر من إجابة سوف يتم تقديرها.
مثال:

- عند إجابةك عن الأسئلة المقالية الاختيارية أجب عن (A) أو (B) فقط.
- عند إجابةك عن الأسئلة الاختيارية من متعدد، أجب وحلت.
- بظل دائرة ذات الرمز الدال على الإجابة الصحيحة تطابقًا كاملاً لكل سؤال.
مثال: الإجابة الصحيحة (C) مثلاً

إجابة الصحيحة:

- في حالة ما إذا أجبت إجابة خطأ، ثم قمت بالشطب وأجبت إجابة صحية تحسب الإجابة صحية.
- ونحو إجابة خطأ قد تطلب صحيحة تحسب الإجابة خطأ.

ملحوظة:

- في حالة الأسئلة الموضوعية (الاختيار من متعدد) إذا تم التقليل على أكثر من رمز أو تم تكرار الإجابة؛ تعتبر الإجابة خاطئة.
Base your answers on what you studied in Biology:

1- Write the scientific term:
   Chemical substances recruit of large circulating phagocyte cells which are found in blood to sites of existence of microbes in mature female?

2- Write the number represents the following:
   1st) Pairs of ribs connected to the sternum.
   2nd) Foot and the ankle bones.

3- What are the results of:
   Nuclei from toad embryonic cells at different stages of development were removed and transplanted into unfertilized toad eggs whose nuclei had been removed.
4- Choose only the right answer of the following:

During the second infection with the same pathogen the memory cells start dividing quickly to produce large amounts of the…………………

a) Antibodies and the fixed macrophages.
b) Antibodies and the active T-cells.
c) Active T-cells and the major histocompatibility complex.
d) Active T-cells and the mast cells.

5- Choose only one question (A) or (B) and then give reason for:

A) Sexual reproduction may occur although the presence of one parent.
B) Using of coconut milk in tissue culture experiments.
6- What would happen with:

The increase secretion of testosterone hormone from cortex of the adrenal glands in mature female?

<table>
<thead>
<tr>
<th>1- ماذا يحدث عند:</th>
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<tbody>
<tr>
<td>زيادة إفراز الهرمونات الجنسية المذكورة من قشرة الغدة الكظرية في امرأة ناضجة؟</td>
</tr>
</tbody>
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7- Choose only one question (A) or (B) and then compare between the following:

A) Tonsils & Peyer’s patches.
B) The epidermal cells of the plant & the cell wall (concerning: the definition).

<table>
<thead>
<tr>
<th>7- اختر أحد السؤالين (أ) أو (ب) ثم قارن بين كل من:</th>
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<tbody>
<tr>
<td>أ- اللوزتان وقع بأبر.</td>
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<tr>
<td>ب- الأمة الخارجية والجدار الخلوي كمناعة تركيبية في النبات.</td>
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</table>
8- The following figure represents DNA replication, then answer the following question:

1st) The part (B) show……
   a) Template strand of DNA.
   b) Replicated DNA strand.
   c) Promoter sequence.

2nd) Which of (B or C) formed in the form of small pieces?

3rd) Which enzymes needed to build each of (B & C)?
9- What is the role of each of the following:

1st) Epididymis and prostate gland in human male.

2nd) Finger-like ends in funnel of fallopian tube and vagina folds in human female.

10- Choose only one question (A) or (B) and then write its scientific term:

A) Proteins that stop the virus’s multiplication as those that cause influenza and poliomyelitis.

B) Proteins play a role in the spatial organization of DNA within the nucleus.
11- Choose only one question (A) or (B) and then mention the importance:

A) The posterior part of the skull (cerebral part).
B) Pulling roots in corms and bulbs.

12- Choose only one question (A) or (B) and then give reasons for:

A) The gametophyte of Polypodium is haploid.
B) The testes lies outside the body in the most of Mammalia.
13- Show how to obtain:
A number of planaria worms from one worm?

14- Choose only the right answer of the following:
The cells that regulate the degree of immune response required to limit and discourage after elimination the pathogen ........

a) Helper T-cells.
b) Cytotoxic T-cells.
c) Suppressor T-cells.
d) Eosinophil.
15- How can scientists obtain a plant strains do not need nitrogenous fertilizers?

16- If the ribonucleated sequence of mRNA as the following:

5' ...... AUG – CCU – UGA – GCA – AUG – UAA ...... 3'

1st) Write the nucleotides sequence resulted from the action of reverse transcriptase enzyme on this sequence.

2nd) How many amino acids formed during transcribed from this sequence?
17- Illustrate by drawing only with complete labels the structure of the muscle fiber.

18- Look at the figure below then answer:
1st) What does no. (3) represent.
2nd) How are the antigen-antibody complex formed?
3rd) What is the type of immune response which depends on the presence of antibodies?
19- Choose only one question (A) or (B) and then write its scientific term:
A) A flower has (4) floral whorls, leaves of each whorl alternate with that of the next whorl.
B) Single cells are adapted for direct growth into complete plants.

20- How can DNA hybridization be used to tell whether a particular gene is present in its genome and in what amount?
21- What would happen when:

Destruction of infected red blood cells with merozoits of Plasmodium malaria.

22- Choose only the right answer of the following:

The embryo has the ability to respond for stimulation during the ...... month of pregnancy.

a) 3rd  

b) 4th  

c) 6th  

d) 8th  

22- اختبر الإجابة الصحيحة فقط مما يلي؛ يصبح الجنين له القدرة على الاستجابة في الشهر ...... من الحمل.

1) الثالث.
2) الرابع.
3) السادس.
4) الثامن.
23- What would happen when:

Binding of antibodies to the outer coats of the viruses.

24- Compare between the following:

The male and female genital system (concerning: the function)

<table>
<thead>
<tr>
<th>Male genital system</th>
<th>Female genital system</th>
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<tbody>
<tr>
<td>الجهاز التناسلي الذكر</td>
<td>الجهاز التناسلي الأنثى</td>
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</table>
25- Choose only one question (A) or (B) and then illustrate by drawing:

A) Germinated pollen grain.
B) Starting with zygospore explain the stages the scalariform conjugation in Spirogyra.
26- Look at the following figure then answer:

1st) What is the type of joint between (1) and (3)?

2nd) What would happen when absence the structure no. (2)?

3rd) How can structure no. (2) be obtained its food and oxygen needed?

4th) What is the importance of this structure in figure?

Diagram:

(1) (2) (3)
27- If you have gene carry the following sequences of DNA contains the following sequence:

\[
3\ldots TAC – TCC – TAC – TCC - ATT\ldots 5
\]

Answer the following:

1\textsuperscript{st}) Write the sequence of nitrogen bases on transcribed mRNA from the previous strand.

2\textsuperscript{nd}) Write the number of amino acids produced from translated part of mRNA.

3\textsuperscript{rd}) Count the number of tRNA types used in this translation.

28- Choose only one question (A) or (B) and then give reason for the following:

A) The twinning of tendril around the support in plants.

B) Formation of the transverse links that extended from the myosin filaments of the muscle fiber.
29- Choose only the right answer of the following:
The cells that destroy foreign bodies, and change into phagocyte cells when needed is the..... .

a) Mast cells.  

b) Basophils.  

c) Eosinophil. 

d) Monocytes.

30- Explain the following statement:
The endometrium enlarges after the fertilization of ovum.

31- What would happen after:
The disappearance of nucleolus from the nucleus of eukaryotic cell?
32- Write the scientific term:
Binding antibody to more than one microbe, this leads to the adhering of microbes on the same antibody, this makes them weaker and liable to be engulfed by phagocytes.

33- Mention the number of chromosomal sets in each of the following:
A) Ookinite in life cycle of plasmodium (malaria parasite).
B) Secondary oocyte in the ovary.

34- Choose only one question (A) or (B) and then compare between:
A) Perforating protein & Lymphokines.
B) Cytotoxic T-cells (Tc) & Helper T-cells (Th).
35- Mention the site and the function of the following:

1st) ACTH
2nd) ADH.

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<thead>
<tr>
<th>Site</th>
<th>Function</th>
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<tbody>
<tr>
<td>ACTH</td>
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<tr>
<td>ADH</td>
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</table>
36- Look at the following figure, then answer the following:

1st) Write the labels nos. (1), (2) & (3).

2nd) Write what the part no. (4) represents?

37- Choose only one question (A) or (B) and then write its scientific term:

A) A curved bone binds to down ward and attached posteriorly to the centrum of vertebra and its transverse process.

B) A continuous rotational movement of the cytoplasm in one direction in the plant cell.
38- Choose only one question (A) or (B) and then give an account on:

A) Interleukins.
B) The cork formation.

39- Choose only one question (A) or (B) and then mention the site and the function.

A) The endosperm.
B) Embryonic membranes.

<table>
<thead>
<tr>
<th>The site</th>
<th>The Function</th>
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40- Choose only the right answer of the following:
The second meiotic division in the secondary oocyte of human female takes place in the ...........

(a) Graafian follicle.
(b) Endometrium.
(c) Fallopian tube.
(d) Uterine cavity.

41- Give reason for:
The lymphocytes at the beginning they do not have any immune ability.
42- What would happen if:

Growing tip of a plant is treated with the mustard gas?
43- The figure below show a T. S. in the testis of a human male, look at it then answer the following:

1°) What would happen if the structure no. (1) is absent? What is the importance of structure no. (2)?

2°) What does no. (3) point to? What is the chromosomal number for no. (4)?
44- Compare between the following:

Alpha cells & Beta cells in islets of Langerhans.

<table>
<thead>
<tr>
<th>Alpha cells</th>
<th>Beta cells</th>
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</thead>
<tbody>
<tr>
<td>خلايا ألفا</td>
<td>خلايا بيتا</td>
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45- You have a mRNA carries the following sequence:

5'... AUG – UAU – GUG – AAU – ACC – UAA ...3'

The codons of amino acids were:

<table>
<thead>
<tr>
<th>Methionine</th>
<th>Tyrosine</th>
<th>Valine</th>
<th>Asparagine</th>
<th>Threonine</th>
<th>Glycine</th>
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<tbody>
<tr>
<td>AUG</td>
<td>UAU</td>
<td>GUG</td>
<td>AAU</td>
<td>ACC</td>
<td>GCG</td>
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Answer the following:

1st) Write the anticodons on the tRNA to the previous sequence.
2nd) Write the sequence of amino acids in a polypeptide chain translated from this strand.