

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



كلية العلوم

القسم : علم الحياة

السنة : الثالثة

اسئلة دورات محلولة

نيولوجيا حيوانية

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مكتبة A to Z : Facebook Group

كلية العلوم (فيزياء ، كيمياء ، رياضيات ، علم الحياة)

يمكنكم طلب المحاضرات برسالة نصية (SMS) أو عبر (What's app) على الرقم TEL: 0931497960

The first question: Answer two of the following three questions (No more than four lines) /20 marks/ اختياري

1- Classify the genus homo. /10 marks/

the family hominidae, /2 درجة/

the order primates, /2 درجة/

the class mammalia, /2 درجة/

the phylum chordata, /2 درجة/

the kingdom animalia, /2 درجة/

the domain eukarya.

2- what are the organelles within a eukaryotic cell? List them and talk about one of them.

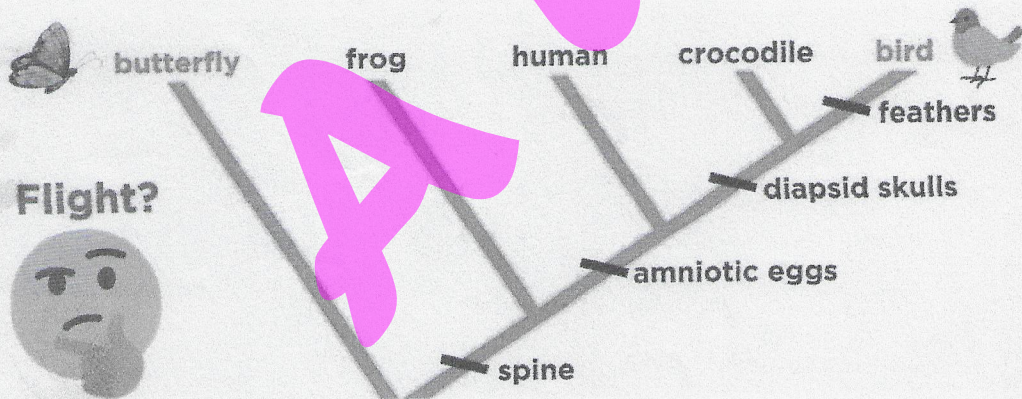
/10 marks/

Nucleus – Mitochondria - Endoplasmic Reticulum (ER) - Golgi Apparatus

Lysosomes – Ribosomes - Chloroplasts (in plant cells) – Vacuoles -Cytoskeleton.

/ يكفي تعداد خمس متعضيات كل واحدة درجة ، ولشرح واحدة منهم ٥ درجات/

3- Please build a cladogram for these five organisms: butterflies, frogs, humans, crocodiles, and birds. /10 marks/



/ درجة لترتيب كل كائن حي ضمن المخطط التفرعي التصنيفي ودرجة لكل صفة مضافة + درجة لشكل المخطط/

* يُقبل كتابة المخطط التفرعي بشكل جدول

أو كتابة كسناد

ملاحظة: الجدول يصل على كامل العلامة

النقار! زالم نيطر أ الحيوانات المذكورة
بالسؤال تحسب ثلاث درجات / سبع ٧ /

The second question: What is the scientific term that matches the following definitions? / 20 marks/ ٤ درجة لكل مصطلح

- 1- DNA.
- 2- Centrosome.
- 3- The tree of life.
- 4- Cladograms.
- 5- The plasma membrane.

The third question: Choose the most accurate answer among the four suggested options / 20 marks/ ٤ درجة لكل مصطلح

- 1- b. Prokaryotic Cell wall.
- 2- c. Mitochondria.
- 3- a. Gram-positive bacteria.
- 4- a. Archaea
- 5- d. The cytoplasm.

The fourth question: Determine if the following statements are true or false / 20 marks/ / درجتين لكل كلمة صح او خطأ في موقعها الصحيح

- | | | | |
|------------|-----------|-----------|------------|
| 1. True. | 2. False. | 3. True. | |
| 4. False . | 5.False. | 6. False. | |
| 7. True. | 8. True. | 9. True . | 10. False. |

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

/ ٤ درجات لطرح سؤال منطقي و٦ درجة للإجابة عليه /

Dr. Maissoun Ziadeh

The first question: Answer two of the following three questions (No more than four lines)

/20 marks/

- 1- Talk about the Stanley Miller and Harold Urey experiment.
- 2- Talk about the Endosymbiotic Theory.
- 3- Classify the genus homo.

The second question: What is the scientific term that matches the following definitions?

/ 20 marks/

1.is the molecule of life.
2. complex macromolecules made of RNA and proteins.
3. consists of a series of stacks, and there is a cis face, usually facing the ER, where vesicles arrive, and a trans face, where vesicles leave.
4. has many branches, where different species evolved from a common ancestor.
5.are moments during or in between phases throughout the cell cycle.

The third question: Choose the most accurate answer among the four suggested options

/ 20 marks/

1. Rigid structure, made of peptidoglycan, creates a mesh-like layer around the cell

- | | |
|---------------------------------|--|
| a. Eukaryotic Cell wall. | b. Prokaryotic Cell wall. |
| c. Cell wall for all organisms. | d. All previous answers (a,b,c) are false. |

2- It is a sac containing an environment that is much more acidic than the rest of the cell, and it holds enzymes that digest large molecules via hydrolysis.

- | | |
|------------------|-------------------------|
| a. The lysosome. | b. The Golgi apparatus. |
| c. Mitochondria. | d. The smooth ER. |

3. It is a kingdom within the domain eukarya

- | | |
|--------------|--------------|
| a. Reptilia. | b. Amphibia. |
| c. Mammalia. | d. Plantae. |

4. Each animal listed on a cladogram is more closely related to the animal
- a. on its right.
 - b. on its left.
 - c. Above it.
 - d. All previous answers (a,b,c) are false.

5. When the genome gets copied or synthesis
- a. The G1 phase.
 - b. The G2 phase.
 - c. The interphase.
 - d. The S phase.

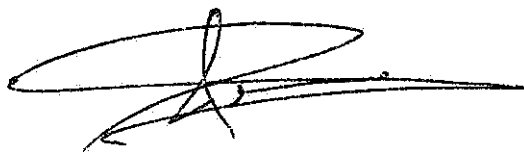
The fourth question: Determine if the following statements are true or false / 20 marks/

1. there's a hypothesis that proposes that the first organic compounds were transported to the earth from space, This is called the panspermia hypothesis.
2. Gram-positive bacteria have cell walls with lots of peptidoglycan, so they do not retain the stain very well, so they show up with more of a pink color.
3. The rough endoplasmic reticulum's surface is studded with ribosomes, giving it a rough appearance.
4. Centrosome can be found only in animal cells.
5. Crocodiles, snakes and lizards are reptiles.
6. The position of animals which listed on a certain cladogram refer to their evolution.
7. Humans have 46 chromosomes in all somatic cells.
8. Cancer involves cells that are dividing out of control, which leads to the development of a tumor.
9. Prokaryotic cells have their genetic information inside a nucleus.
10. Mitochondria can digest damaged organelles.

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

Wishing you the best of luck 12/2/2025

Lecturer: Dr. Maissoun Ziadeh



The first question: Answer two of the following three questions (No more than four lines) /20 marks/ اختياري

1- Stanley Miller and Harold Urey experiment: /10 marks/ 2.5/ درجة لكل جملة/

- a- They set up a system that mimics conditions early in earth's history.
- b- they placed water, ammonia, methane, and hydrogen.
- c- it was exposed to heat as well as an electric current, (lightning).
- d- After about a week, they found a number of different amino acids, which are the building blocks of proteins.

2- Endosymbiotic Theory: /10 marks/ 2.5/ درجة لكل جملة/

- a- Some species of bacteria acquired unique functions, like the ability to perform photosynthesis, or breathe oxygen.
- b- larger host cells enveloped some of them.
- c- instead of digesting them, a mutual dependency arose.
- d- The smaller cell received protection, while the larger one take energy.

3- We humans belong to the genus homo. /10 marks/

the family hominidae, /2 درجة/

the order primates, /2 درجة/

the class mammalia, /2 درجة/

the phylum chordata, /2 درجة/

the kingdom animalia, /2 درجة/

the domain eukarya. /2 درجة/

The second question: What is the scientific term that matches the following definitions? / 20 marks/ 4 درجة لكل مصطلح

1- DNA.

2- Ribosomes.

The first question: Answer two of the following three questions (No more than four lines) /20 marks/ اختياري

1- Stanley Miller and Harold Urey experiment: /10 marks/ 2.5/ درجة لكل جملة/

- a- They set up a system that mimics conditions early in earth's history.
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the kingdom animalia, /2 درجة/

the domain eukarya. /2 درجة/

The second question: What is the scientific term that matches the following definitions? / 20 marks/ 4 درجة لكل مصطلح

1- DNA.

2- Ribosomes.

- 3- The Golgi apparatus.
- 4- The tree of life.
- 5- The Checkpoints.

The third question: Choose the most accurate answer among the four suggested options / 20 marks/ 4 درجة لكل مصطلح /

- 1- b. Prokaryotic Cell wall.
- 2- a. The lysosome.
- 3- d. Plantae.
- 4- a. on its right.
- 5- d. The S phase.

The fourth question: Determine if the following statements are true or false / 20 marks/ / درجتين لكل كلمة صح او خطأ في موقعها الصحيح /

- | | | | |
|----------|-----------|-----------|------------|
| 1. True. | 2. False. | 3. True. | |
| 4. True. | 5. True. | 6. False. | |
| 7. True. | 8. True. | 9. False. | 10. False. |

The fifth question: Choose a scientific topic discussed in the course. Write down the question and its answer. (No more than five lines) / 20 marks/

/ 4 درجات لطرح سؤال منطقي و16 درجة للإجابة عليه /

Dr. Maissoun Ziadeh

Final Exam of Animal Biology: 3rd Year Biology
Exams for Academic Year 2023- 2024: 2nd term

- 1) What are types of proteins embedded in cell membrane with explanation (10 D)
2) Choose the most accurate answer of the following: (50 D)

- 1- A group of protozoa that its members are sessile and don't move at all is:
A- Flagellates B- Ciliates C- Sporozoa D- Amoebae
- 2- Polypeptides are chains of:
A- nucleic acid B- fatty acid C- amino acid D- fructose
- 3- The number of nucleoli in the nucleus is different and ranges from one up to:
A- 3 B- 4 C- 5 D- 8
- 4- All the following vitamins are water non-soluble except:
A- A B- K C- D D- C
- 5- Protozoa exchange genetic material by sexual means through:
A- binary fission B- multiple fission C- conjugation D- A&B
- 6- The nucleus of the cell contains majority of the cells genetic material, but a small fraction of genes is also found in:
A- Lysosomes B- Peroxisomes C- Centrioles D- Mitochondria
- 7- The form of sugar which is stored in the culms of sugar cane is:
A- sucrose B- fructose C- glucose D- C&B
- 8- The group of Protista that are found in fresh water as well as in marine waters is:
A- Dianoflagellates B- Euglenoids C- Chrysophytes D- slime moulds
- 9- The animal cell has the following structures except:
A- Cell wall B- Lysosomes C- Peroxisomes D- Ribosomes
- 10- The stage, at which the virus injects its DNA or RNA into the host cell, is:
A- entry B- adsorption C- assembly D- replication.
- 11- Starch is an example of:
A- vitamins B- Monosaccharides C- Disaccharides D- Polysaccharides
- 12- The fine study of different body tissues is called:
A- morphology B- anatomy C- histology D- embryology
- 13- The group of protozoa that has two nuclei is:
A- sporozoa B- flagellates C- ciliates D- amoebae
- 14- Lipids consist of the following atoms except:
A- nitrogen B- hydrogen C- carbon D- oxygen.
- 15- Protozoa was considered in many ranks of taxonomy except:
A- Phylum B- Subphylum C- Kingdom D- Subkingdom
- 16- All information about Paramecium are true except:
B- has two nuclei C- lives in fresh water D- has chloroplasts
- 17- All following characteristics define cardiac muscle cells except:
A- voluntary controlled B- striated C- branched D- single nucleated
- 18- A class belong to invertebrates is:
A- Reptiles B- Crustaceans C- Aves D- Amphibians
- 19- Adipose cells have an endocrine function as they produce hormones that influence all the following except:
A- blood clotting B- insulin sensitivity
C- vitamin producing D- cell signalling
- 20- A group of organisms that moves with help of flagella is:
A- Dianoflagellates B- Euglenoids C- Ciliates D- A&B

Next page

- 21- One compound that doesn't belong to lipid compounds is:
 A- Waxes B- Steroids C- Starches D- Triglycerides
- 22- DNA nucleotides does not include:
 A- Uracil B- Guanine C- Adenine D- Thymine
- 23- A compound that does not belong to proteins is:
 A- cellulose B- haemoglobin C- collagen D- enzyme
- 24- The level of ecology in which a biological community consists of all the populations of different species that live in a given area is called:
 A- Organism level B- Population level
 C- Community level D- Ecosystem level
- 25- The branch of ecology which deals with the application of ecological concepts to meet human needs is called:
 A- Applied ecology B- Human ecology,
 C- Physiological ecology D- Genecology

- 3) Put the correct word from the following words in the suitable blank: (22 D)
 fertilize, digestive, penetration, cytoplasm, triggers, polyspermy
 rearrangements, fusion, tunnel, sperm, haploid

Fertilization occurs in three stages; sperm --1-- and member fusion, egg activation, and --2-- of nuclei. For a sperm to --3-- an ovum it must penetrate the external layers to reach the plasma membrane. The acrosome contains --4-- enzymes that enable the sperm to --5-- its way through the external layers of the egg. Fusion of the plasma membranes of both egg and sperm allow the --6-- nucleus to pass directly into the egg --7--. Fusion of membranes --8-- egg activation by the release of calcium, which initiate changes in the egg. Blocks to --9-- include changes in membrane potential and altering of the external coat of the egg. Sperm penetration has other effects on the egg: meiosis is completed, cytoplasmic --10-- occur and protein synthesis increases sharply. Fertilization is completed when the --11-- sperm nucleus fuses with the haploid egg nucleus and forming the diploid zygote.

- 4) Match the phrase in list (A) with its complemented phrase from List (B) (18):
 (Just write the correct letter from list B in front of matching number from list A)

List (A)

1- Photoreceptor cells are cells in the eye that detect light

2- A group of species of obligated intracellular protozoan parasites

3- Most freshwater amoebae have a contractile

4- Cells can be disassembled by chemical methods, and

5- Without mitochondria, higher animals would likely not exist because

6- A group of resembling individuals is called a species which can be known

List (B)

A- classified as Sporozoa because they form spores.

B- their individual organelles and macromolecules isolated for study.

C- easily by knowing one of its individuals.

D- their cells would only be able to obtain energy from anaerobic

E- and they are very specialised forms of neuron.

F- vacuole which regulates the osmosis pressure.

Best Wishes

Tartous 24/7/2024

Dr. Ali A Mansour



جامعة طرطوس

كلية العلوم

قسم علم الحياة

سلم تصحيح مقرر البيولوجيا الحيوانية لطلاب السنة الثالثة

د. علي منصور

الدورة الثانية - العام الدراسي 2023-2024

1) Answer 1 (10 D marks)

- Channel Proteins - form small openings for molecules to diffuse through.
- Carrier Proteins- binding site on protein surface that "grabs" certain molecules and pulls them into the cell, (gated channels).
- Receptor Proteins - molecular triggers that set off cell responses (such as release of hormones or opening of channel proteins).
- Cell Recognition Proteins - ID tags, to identify cells to the body's immune system.
- Enzymatic Proteins - carry out metabolic reactions.

2) Answer 2: (50 Marks two marks for each choice)

- 1-C- Sporozoa, 2- C- amino acid, 3- B- 4, 4- D- C, 5- C- conjugation,
- 6- D- Mitochondria, 7- A- sucrose, 8- C- Chrysophytes 9- A- Cell wall
- 10- A- entry, 11- D- Polysaccharides, 12- C- histology, 13- C- ciliates,
- 14- A-nitrogen, 15- B- Subphylum, 16- D- has chloroplasts,
- 17- A- voluntary controlled, 18- B- Crustaceans, 19- C- vitamin producing,
- 20- D- A&B, 21- C- Starches, 22- A-Uracil, 23- A- cellulose,
- 24- -C-Community level, 25-A- Applied ecology,

3) Answer 4: (22 Marks one mark for each word):

- 1- penetration, 2- fusion, 3- fertilize, 4- digestive, 5- tunnel,
- 6- sperm, 7- cytoplasm, 8- triggers, 9- polyspermy, 10-rearrangements
- 11- haploid

4) Answer 5: (18 marks 3 mark for each correct connection):

- 1- E, 2- A, 3- F, 4- B, 5- D, 6- C

Dr. Ali A Mansour



24/7/2024

Final Exam of Animal Biology: 3rd Year Biology
Exams for Academic Year 2023- 2024: 1st term

- 1) There are many types of bone cells. What are they (with explanation)? (12 D)
- 2) Choose the most accurate answer of the following: (50 D)
- 1- Polypeptides are chains of:
A- amino acid, B- fatty acid, C- nucleic acid, D- fructose.
 - 2- The number of nucleoli in the nucleus is different and ranges from one up to:
A - 2, B-3 , C- 4, D- 5.
 - 3- All the following vitamins are fat-soluble except:
A- A, B- C, C- D, D- K.
 - 4- Protozoa reproduce asexually by:
A-binary fission, B-multiple fission, C- conjugation, D- A&B.
 - 5- The nucleus of the cell contains majority of the cells genetic material, but a small fraction of genes is also found in:
A- Lysosome, B- Mitochondria, C- Centrioles, D- Peroxisomes.
 - 6- The form of sugar which is stored in the roots of sugar beets is:
A- glucose, B- fructose, C- sucrose, D- A&B.
 - 7- The group of Protista that have an appearance of various colours is:
A- Dianoflagellates, B- Euglenoids, C- Chrysophytes, D- slime moulds
 - 8- The plant cell has the following structures except:
A- Cell wall, B- Lysosomes, C- plastids, D- Ribosomes
 - 9- The stage, at which particles of the virus created by the cell come together to form new viruses, is: A- entry, B- adsorption, C- assembly, D- replication.
 - 10- Glycogen is an example of: A- Monosaccharides, B- Disaccharides
C- Polysaccharides, D- vitamins
 - 11- The fine study of different body tissues is called:
A- morphology, B- histology C- anatomy, D- embryology
 - 12- The group of protozoa that has two nuclei is:
A- sporozoa, B- ciliates, C- flagellates, D- amoebae
 - 13- Lipids consist of the following atoms except:
A- hydrogen, B- carbon, C- sulphur, D- oxygen.
 - 14- Protozoa was considered in many ranks of taxonomy except:
A-Phylum, B- Subphylum, C- Kingdom, D- Subkingdom
 - 15- All these information about Paramecium are true except: A- has chloroplasts,
B- has two nuclei, C-lives in fresh water, D- moves by cilia.
 - 16- All following characteristics define skeletal muscle cells except:
A- voluntary controlled, B- striated, C-not branched, D- single nucleated
 - 17- A class doesn't belong to Vertebrates is:
A- Reptiles, B- Crustaceans, C- Aves, D- Amphibians
 - 18- Adipose cells have an endocrine function as they produce hormones that influence all the following except: A- blood clotting, B- vitamin producing,
C- insulin sensitivity, D- cell signalling.
 - 19- A group of organisms that moves without help of flagella is:
A- Dianoflagellates, B- flagellates, C- Ciliates, D- Euglenoids
 - 20- One compound that doesn't belong lipid compounds is:
A- Waxes, B- Starches, C- Steroids, D- Triglycerides

- 21- RNA nucleotides does not include:
 A- Uracil, B- Guanine, C- Adenine, D- Thymine
- 22- A compound that does not belong to proteins is:
 A- collagen, B- haemoglobin, C- cellulose, D- enzyme.
- 23- The level of ecology that often focus on flow of energy and recycling of nutrients is called:
 A- Organism level, B- Population level,
 C- Community level, D- Ecosystem level.
- 24- The branch of ecology which deals with the application of ecological concepts to meet human needs is called:
 A- Human ecology, B- Applied ecology,
 C- Physiological ecology, D- Genecology
- 25- The class of protozoa that has pseudopods is:
 A- Flagellates, B- Ciliates, C- Sporozoa, D- Amoebae

3) Put the correct word from the following words in the suitable blank: (20 D)

activation, polyspermy, ovum, nucleus, acrosome,
 zygote, egg, sperm, meiosis, nuclei

Fertilization occurs in three stages; --1-- penetration and member fusion, egg activation, and fusion of --2-- . For a sperm to fertilize an --3-- it must penetrate the external layers to reach the plasma membrane. The --4-- contains digestive enzymes that enable the sperm to tunnel its way through the --5-- layers of the egg. Fusion of the plasma membranes of both egg and sperm allow the sperm --6-- to pass directly into the egg cytoplasm. Fusion of membranes triggers egg --7-- by the release of calcium, which initiate changes in the egg. Blocks to --8-- include changes in membrane potential and altering of the external coat of the egg. Sperm penetration has other effects on the egg: --9-- is completed, cytoplasmic rearrangements occur and protein synthesis increases sharply. Fertilization is completed when the haploid sperm nucleus fuses with the haploid egg nucleus and forming the diploid --10--.

4) Match the phrase in list (A) with its complemented phrase from List (B) (18):
 (Just write the correct letter from list B in front of matching number from list A)

- | List (A) | List (B) |
|---|---|
| 1- A group of resembling individuals is called a species which can be known | A- vacuole which regulates the osmosis pressure. |
| 2- Photoreceptor cells are cells in the eye that detect light | B- classified as Sporozoa because they form spores. |
| 3- A group of species of obligated intracellular protozoan parasites | C- their individual organelles and macromolecules isolated for study. |
| 4- Most freshwater amoebae have a contractile | D- easily by knowing one of its individuals. |
| 5- Cells can be disassembled by chemical methods, and | E- their cells would only be able to obtain energy from anaerobic |
| 6- Without mitochondria, higher animals would likely not exist because | F- and they are very specialised forms of neuron. |

Best Wishes

Tartous 31/1/2024

Dr. Ali A Mansour



جامعة طرطوس

كلية العلوم

قسم علم الحياة

سلم تصحيح مقرر البيولوجيا الحيوانية لطلاب السنة الثالثة

د. علي منصور

الدورة الأولى- العام الدراسي 2023-2024

1) Answer 1 (12 D marks)

A- Osteoprogenitors: these cells divide to produce cells which are signalled to Osteoblasts.

B- Osteoblasts: these cells produce protein matrix and organic matrix that are required for bone growth and strengthening.

C- Osteocytes: these produce proteins and organic materials which make up the intercellular material.

D- Osteoclasts: cells those are responsible for the breakdown of bones when calcium concentration in blood becomes low.

2) Answer 2: (50 Marks two marks for each choice)

- 1- A- amino acid, 2- C- 4, 3- B- C, 4- D- A&B,
5- B- Mitochondria, 6- C- sucrose, 7- A- Dianoflagellates, 8- B- Lysosomes
9- C- assembly, 10- C- Polysaccharides, 11- B- histology, 12- B- ciliates,
13- C- Sulphur, 14- B- Subphylum, 15- A- has chloroplasts,
16- D- single nucleated, 17- B- crustaceans, 18- B- vitamin producing,
19- C- Ciliates, 20- B- Starches, 21- D- Thymine, 22- C- cellulose,
23- D- Ecosystem level., 24- B- Applied ecology, 25- D- Amoebae

3) Answer 4: (20 Marks one mark for each word):

- 1- sperm, 2- nuclei, 3- ovum, 4- acrosome, 5- egg,
6- nucleus, 7- activation, 8- polyspermy, 9- meiosis, 10- zygote

4) Answer 5: (18 marks 3 mark for each correct connection):

- 1- D, 2- F, 3- B, 4- A, 5- C, 6- E

Dr. Ali A Mansour

31/1/2024



اسم الطالب:
المدة: ساعتان
الدرجة: 100

جامعة طرطوس
كلية العلوم
قسم علم الحياة

الامتحان النظري لمقرر بيولوجيا حيوانية (انكليزي)
لطلاب السنة الثالثة - الدورة التكميلية 2022 - 2023

- 1) What are the basic principles of biology? Explain one of them. (15 D)
- 2) Choose the correct answer of the following: (24 D)
- The biological process by which new individuals are produced is called:
A- Reproduction, B- Evolution, C- Encystation, D- Adaptation.
 - Studying external features such as body parts or features of the skin is called:
A- Anatomy, B- Morphology, C- Histology, D- Microbiology.
 - In Primary structure of protein ----- are linked together by peptide bonds.
A-fatty acids, B- amino acids, C- nucleic acids, D- fructose.
 - Adaptations that affect how an organism acts are called:
A-Structural, B- Physiological, C- Behavioural, D- A&C.
 - Twins result from fertilization of more than two eggs by different sperms are called:
A- Identical, B- fraternal, C- conjoined, D- multiple.
 - Fraternal twins might be:
A- two boys, B- two girls, C- a boy & a girl, D- all right
 - Sucrose is an example of : A- Monosaccharides, B- Disaccharides
C- Polysaccharides, D- vitamins
 - Blood cells that help to clot blood and prevent excessive blood loss are:
A- red cells, B- neutrophils, C- lymphocytes, D- platelets.
 - Cancer cells lose the ability to undergo programmed cell death or what is called:
A- Angiogenesis, B- senescence, C- apoptosis, D- conjugation.
 - The group of protozoa that has two nuclei is:
A- sporozoa, B- ciliates, C- flagellates, D- amoebae
 - Sacs of enzymes that digest cellular macromolecules in the cell are:
A- Mitochondria, B- Lysosomes, C- Centrioles, D- Golgi Complexes
 - The stage at which the particle of virus injects its DNA or RNA into the host cell is:
A- entry, B- adsorption, C- assembly, D- replication.
- 3) Choose the wrong answer of the following: (26 D).
- Paramecium: A- lives in fresh water, B- has the pellicle,
C- moves by cilia, D- has one nucleus.
 - Carbohydrates consist of the following atoms:
A- hydrogen, B- nitrogen, C- oxygen, D- carbon
 - Prokaryotic cell contains the following structures:
A- Cytoplasm, B- Peroxisomes, C- Ribosomes, D- Cell wall.
 - Some characteristics that define smooth muscle cells are:
A-non-voluntary controlled, B- striated, C- not-branched, D- single nucleated
 - An example of organelle is:
A- Mitochondrion, B- Golgi complex, C- Protein, D- Lysosome.
 - Archaea can be classified into many subcategories such as:
A- Methanogens, B- Halophiles, C- Amoebae, D- Acidophiles

Next page

- 7- Advantages of the renewal properties of stem cells enable scientists in utilizing them to generate cells for: A- tumour suppression, B- organ transplantation, C- treatment of disease, D- tissue repair.
- 8- Each of the following compounds is type of Carbohydrates:
A- Glucose, B- Sucrose, C- Chitin, D- Haemoglobin
- 9- RNA nucleotide contains one of four different nitrogenous bases:
A- Uracil, B- Adenine, C- Thymine, D- Guanine
- 10- Some characteristics of nucleus are:
A- mostly rounded, B- it has nucleoplasm inside,
C- double-membrane bound organelle, D- the smallest organelle of the cell
- 11- Protozoa was considered in different ranks of taxonomy including:
A- Subphylum, B- Subkingdom, C- Phylum, D- Kingdom
- 12- Vertebrates include classes such as:
A- Aves, B- Reptiles, C- Crustaceans, D- Amphibians
- 13- Protozoa has many groups such as:
A- Sporozoa, B- Flagellates, C- Dinoflagellates, D- Ciliates
- 4) Put the correct word from the following words in the suitable blank: (20 D)

mingle, attracted, basic, strings, bilayer, membrane,
fatty, hydrophilic, phospholipid, hydrophobic

Phospholipids make up the --1-- structure of a cell --2--. A single --3-- molecule has two different ends: a head and a tail. The head end contains a phosphate group and is --4--; this means that it likes or is --5-- to water molecules. The tail end is made up of two --6-- of hydrogen and carbon atoms called --7-- acid chains; These chains are --8-- or do not like to --9-- with water molecules. The phospholipids of a cell membrane are arranged in a double layer called the lipid --10--.

- 5) Match the phrase in list (A) with its complemented phrase from List (B) (15):
(Just write the correct letter from list B in front of matching number from list A)

- | | |
|---|--|
| 1- Without mitochondria, higher animals would likely not exist because | A- easily by knowing one of its individuals. |
| 2- A group of resembling individuals is called species which can be known | B- in minute amounts in natural foods. |
| 3- Cancer results from the development of abnormal properties in | C- so they need to change their shape to 'swallow' them. |
| 4- Some immune cells engulf bacteria and viruses, | D- normal cells that enable them to divide uncontrollably. |
| 5- Vitamins are a group of organic compounds that are present | E- their cells would only be able to obtain energy from anaerobic respiration. |

Best Wishes

Tartous 17/9/2023

Dr. Ali A Mansour



جامعة طرطوس

كلية العلوم

قسم علم الحياة

سلم تصحيح مقرر البيولوجيا الحيوانية لطلاب السنة الثالثة

الدورة التكميلية- العام الدراسي 2022 -2023

1) Answer 1 (15 D two marks for each one and three marks for any explanation):

- 1- The cell theory, 2- gene theory, 3- evolution, 4- homeostasis, 5- laws of thermodynamics.
- 1- Cell Theory: all living organisms are composed of cells. The cell is the basic unit of life.
- 2- Gene Theory: traits are inherited through gene transmission. Genes are located on chromosomes and consist of DNA.
- 3- Evolution: it is any genetic change in a population that is inherited over several generations. These changes may be small or large, noticeable or not so noticeable.
- 4- Homeostasis: it is ability of an organism to maintain a constant internal environment in response to environmental changes.
- 5- Thermodynamics: energy is constant and energy transformation is not completely efficient.

2) Answer 2: (24 Marks two marks for each choice)

- 1- A- Reproduction, 2- B- Morphology, 3- B- amino acids, 4- C- Behavioural, 5- D- multiple, 6- D- all right, 7- B - Disaccharides, 8- D- platelets, 9- C-apoptosis, 10- B- ciliates, 11- B- Lysosomes, 12- A- entry

3) Answer 3: (26 Marks two marks for each choice)

- 1- D- has one nucleus., 2- B- nitrogen, 3- B- Peroxisomes, 4- B- striated, 5- C- Protein, 6 - C- Amoebae, 7- A- tumour suppression, 8- D- Haemoglobin, 9- C- Thymine, 10- D- the smallest organelle of the cell, 11- A-Subphylum, 12- C- crustaceans 13- C- Dianoflagellates,

4) Answer 4: (10 Marks one mark for each word):

- 1- basic, 2- membrane, 3- phospholipid, 4- hydrophilic, 5- attracted, 6- strings, 7- fatty, 8- hydrophobic , 9- mingle, 10- bilayer.

5) Answer 5: (15 D 3 marks for each one):

- 1- E, 2- A, 3- D, 4- C, 5- B

د. علي منصور

Tartous 17/9/2023

Final Exam of Animal Biology: 3rd Year Biology

Exams for Academic Year 2022- 2023: 2nd term

- 1) What are the six characteristics of life? Explain any one of them? (15 D)
- 2) Choose the most accurate right answer of the following: (24 D)
- 1- Molecules that make up the basic structure of a cell membrane.:
A – Phospholipids, B- Cholesterol, C- glycocalyx, D- Proteins.
 - 2- Cells that are able to divide and replicate many times in order to replenish and repair tissues are: A- Red cells, B- stem cells, C- platelets, D- lymphocytes.
 - 3- A method of asexual reproduction in protozoa is called:
A- conjugation, B- multiple fission, C- binary fission, D- B&C.
 - 4- All the following stages are stages of embryo development except:
A- menstruation, B- fertilization, C- organogenesis, D- gastrulation.
 - 5- The form of sugar which is stored in the roots of sugar beets and the culms of sugar cane is: A- glucose, B- sucrose, C- fructose, D- A&C.
 - 6- The group of Protista that is a connecting link between animals and plants is:
A- Dinoflagellates, B- Chrysophytes, C- Euglenoids, D- slime moulds
 - 7- Hollow rods that function primarily to help, support, and shape the cell:
A- Lysosomes, B- Microtubules, C- Centrioles, D- Golgi Complexes
 - 8- The stage at which particles of the virus created by the cell come together to form new viruses is: A- entry, B- adsorption, C- replication, D- assembly.
 - 9- Chitin is an example of: A- Carbohydrates, B- Lipids
C- Proteins, D- Vitamins
 - 10- The fine study of different body tissues is called:
A- morphology, B- embryology, C- anatomy, D- histology
 - 11- The group of protozoa that has two nuclei is:
A- sporozoa, B- ciliates, C- flagellates, D- amoebae
 - 12- Polypeptides are chains of:
A- nucleic acid, B- fatty acid, C- amino acid, D- glucose.
- 3) Choose the wrong answer of the following: (26 D).
- 1- A structure that found in a prokaryotic cell is:
A- centrioles, B- cytoplasm, C- ribosomes, D- cell wall.
 - 2- Paramecium: A- has two nuclei, B- has chloroplasts,
C- lives in fresh water, D- moves by cilia.
 - 3- From characteristics that define skeletal muscle cells is:
A- non-voluntary controlled, B- striated, C- not branched, D- multi- nucleated
 - 4- Vertebrates include classes such as:
A- Reptiles, B- Insects, C- Aves, D- Amphibians
 - 5- Adipose cells have an endocrine function such as: A- cell signalling,
B- producing hormones, C- insulin sensitivity, D- producing vitamins.
 - 6- A group of microorganisms that moves with the help of flagella is:
A- Dinoflagellates, B- Ciliates, C- Flagellates, D- Euglenoids

- 7- From DNA nucleotides is:
A- Uracil, B- Thymine, C- Adenine, D- Guanine
- 8- Of protein compounds is:
A- collagen, B- haemoglobin, C- cellulose, D- enzymes.
- 9- Some characteristics of nucleus: A- jelly-like fluid, B- mostly rounded,
C- double-membrane bound organelle, D- the largest organelle of the cell
- 10- Protozoa was considered in different ranks of taxonomy including:
A- Phylum, B- Subphylum, C- Kingdom, D- Subkingdom
- 11- Lipids consist of the following atoms:
A- hydrogen, B- sulphur, C- carbon, D- oxygen.
- 12- The class of protozoa that has locomotion organelles is:
A- Flagellates, B- Ciliates, C- Sporozoa, D- Amoebae
- 13- Of the following lipid compounds is:
A- Waxes, B- Triglycerides, C- Steroids, D- Starches
- 4) Put the correct word from the following words in the suitable blank: (20 D)

*active, aged, phenotype, ageing, maturation, functional, mortality,
cellular, change, cease.*

Senescence or biological --1-- is the gradual deterioration of --2-- characteristic of most complex life forms that, on the level of the organism, increases --3-- after --4--. The word "senescence" can refer either to --5-- senescence or to senescence of the whole organism.

Cellular senescence is the phenomenon by which normal diploid cells cease to --6--. Cellular senescence represents a change in "cell --7--" rather than a cell becoming "--8--" as the name confusingly suggests.

Although senescent cells can no longer replicate, they remain metabolically --9-- and commonly adopt an immunogenic --10--.

5) Match the phrase in list (A) with its complemented phrase from List (B) (15):

(Just write the correct letter from list B in front of matching number from list A)

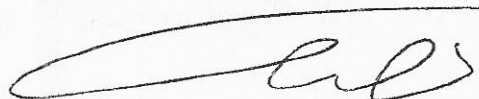
- List (A)**
- 1- Cleavage is a periodic series of cell division that does not increase the size
 - 2- Photoreceptor cells are cells in the eye that detect light
 - 3- The acrosome contains digestive enzymes that enable the
 - 4- In most women, an egg is released from the
 - 5- A group of resembling individuals is called species which can be known

- List (B)**
- A- and they are very specialised forms of neuron.
 - B- sperm to tunnel its way through the external layers of the ovum.
 - C- of the embryo but produce smaller cells called blastomeres..
 - D- easily by knowing one of its individuals.
 - E- ovary about the day 14 before the next period

Best Wishes

Tartous 2/8/2023

Dr. Ali A Mansour



جامعة طرطوس

كلية العلوم

قسم علم الحياة

سلم تصحيح مقرر البيولوجيا الحيوانية لطلاب السنة الثالثة

د. علي منصور

الدورة الثانية - العام الدراسي 2022-2023

1) Answer 1 (25 D marks)

1-Life is ordered, 2- Life can work, 3- Life grows and develops, 4-Life can respond,
5- life can reproduce, 6- life can adapt

Each one (2 marks); Explaining any one of those (3).

2) Answer 2: (24 Marks two marks for each choice)

1- A – Phospholipids, 2-B- stem cells, 3- D- B&C, 4- A- menstruation,
5- B- sucrose, 6-C- Euglenoids, 7-B- Microtubules, 8- D- assembly,
9- A- Carbohydrates, 10- D- histology, 11- B- ciliates, 12-C- amino acid.

3) Answer 3: (26 Marks two marks for each choice)

1- A-centrioles, 2- B- has chloroplasts, 3- A-non-voluntary controlled,
4- B-Insects, 5- D- producing vitamins, 6- B- Ciliates, 7- A- Uracil
8- C- cellulose, 9-A- jelly-like fluid, 10-B- Subphylum, 11-B- sulphur,
12- C-Sporozoa, 13- D- Starches

4) Answer :

ألغي هذا السؤال وتم إعادة توزيع علاماته على السؤالين الأول والخامس

5) Answer 5: (25 marks 5 marks for each correct connection):

1- C, 2- A, 3- B, 4- E, 5- D

Dr. Ali A Mansour

2/8/2023



Final Exam of Animal Biology: 3rd Year Biology

Exams for Academic Year 2022- 2023: 1st term

- 1) What are the stages of bacterial conjugation? (with explanation) (12 D)
- 2) Choose the most accurate answer of the following: (24 D)
- 1- Polypeptides are chains of:
A- amino acid, B- fatty acid, C- nucleic acid, D- fructose.
 - 2- Molecules that make up the basic structure of a cell membrane.:
A – Phospholipids, B- Cholesterol, C- glycocalyx, D- Proteins.
 - 3- Cells that are able to divide and replicate many times in order to replenish and repair tissues are: A- Red cells, B- lymphocytes, C- platelets, D- stem cells.
 - 4- A method of asexual reproduction in protozoa is called:
A-binary fission, B-multiple fission, C-A&B, D-conjugation.
 - 5- All the following stages are stages of embryo development except:
A-organogenesis, B- fertilization, C- menstruation, D- gastrulation.
 - 6- The form of sugar which is stored in the roots of sugar beets and the culms of sugar cane is: A- glucose, B- fructose, C- sucrose, D- A&B.
 - 7- The group of Protista that is a connecting link between animals and plants is:
A- Dianoflagellates, B- Euglenoids, C- Chrysophytes, D- slime moulds
 - 8- Hollow rods that function primarily to help, support, and shape the cell :
A- Microtubules, B- Lysosomes, C- Centrioles, D- Golgi Complexes
 - 9- The stage at which particles of the virus created by the cell come together to form new viruses is: A- entry, B- adsorption, C- assembly, D- replication.
 - 10- Chitin is an example of : A- Monosaccharides, B- Disaccharides
C- Polysaccharides, D- vitamins
 - 11- The fine study of different body tissues is called:
A- morphology, B- histology C- anatomy, D- embryology
 - 12- The group of protozoa that has haploid nucleus is:
A- sporozoa, B- ciliates, C- flagellates, D- amoebae
- 3) Choose the wrong answer of the following: (26 D).
- 1- Lipids consist of the following atoms:
A- hydrogen, B- sulphur, C- carbon, D- oxygen.
 - 2- A structure that found in a prokaryotic cell is:
A- centrioles, B- cytoplasm, C- ribosomes, D- cell wall.
 - 3- Paramecium: A- has chloroplasts, B- has two nuclei,
C-lives in fresh water, D- moves by cilia.
 - 4- From characteristics that define cardiac muscle cells is:
A-non-voluntary controlled, B- striated, C-not branched, D- single nucleated
 - 5- Vertebrates include classes such as:
A- Reptiles, B- Crustaceans, C- Aves, D- Amphibians
 - 6- Adipose cells have an endocrine function as: A-producing vitamins,
B- producing hormones, C- insulin sensitivity, D- cell signalling.

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- 7- A group moves with the help of flagella is:
A- Dianoflagellates, B- flagellates, C- Ciliates, D- Euglenoids
 - 8- Of the following lipid compounds is:
A- Waxes, B- Starches, C- Steroids, D- Triglycerides
 - 9- From RNA nucleotides is:
A- Uracil, B- Thymine, C- Adenine, D- Guanine
 - 10- Of protein compounds is:
A- collagen, B- haemoglobin, C- enzymes, D- cellulose.
 - 11- Some characteristics of nucleus: A- jelly-like fluid, B- mostly rounded,
C- double-membrane bound organelle, D- the largest organelle of the cell
 - 12- Protozoa was considered in different ranks of taxonomy including:
A- Phylum, B- Kingdom, C- Subphylum, D- Subkingdom
 - 13- The class of protozoa that has locomotion organelles is:
A- Flagellates, B- Ciliates, C- Sporozoa, D- Amoebae
- 4) Put the correct word from the following words in the suitable blank: (20 D)

*Chromosomes, Chromatin, Proteins, Division, Molecules, Genome,
Histones, Fraction, Genetic, Mitochondria,*

The nucleus of the cell contains majority of the cells --1-- material in the form of multiple linear DNA --2-- (DNA strands). The DNA molecule is in complex with a large variety of small --3-- called histones. The --4-- in the cell are organized in a DNA-protein complex known as --5--. During cell --6-- the chromatins form well-defined --7--. The genes within the chromosomes comprise the cell nuclear --8--. --9-- of the cell also contain a small --10-- of genes.

5) Match the phrase in list (A) with its complemented phrase from List (B) (18):

(Just write the correct letter from list B in front of matching number from list A)

- | List (A) | List (B) |
|---|---|
| 1- In most women, an egg is released from the | A- and they are very specialised forms of neuron. |
| 2- Cleavage is a periodic series of cell division that does not increase the size | B- vacuole which regulates the osmosis pressure. |
| 3- Photoreceptor cells are cells in the eye that detect light | C- sperm to tunnel its way through the external layers of the ovum. |
| 4- The acrosome contains digestive enzymes that enable the | D- of the embryo but produce smaller cells called blastomeres.. |
| 5- Most freshwater amoebae have a contractile | E- easily by knowing one of its individuals. |
| 6- A group of resembling individuals is called species which can be known | F- ovary about the day 14 before the next period |

Best Wishes

Tartous 25/1/2023

Dr. Ali A Mansour



جامعة طرطوس

كلية العلوم

قسم علم الحياة

سلم تصحيح مقرر البيولوجيا الحيوانية لطلاب السنة الثالثة

د. علي منصور

الدورة الأولى- العام الدراسي 2022-2023

1) Answer 1 (12 D marks)

1. Donor cell produces a pilus.
2. The pilus attaches to the recipient cell and brings the two cells together.
3. The mobile plasmid is nicked and a single strand of DNA is then transferred to the recipient cell.
4. Both cells synthesize a complementary strand to produce a double stranded circular plasmid and also reproduce pili; both cells are now viable donors.

2) Answer 2: (24 Marks two marks for each choice)

- 1- A- amino acid, 2- A – Phospholipids, 3- ~~D~~ stem cells, 4- C-A&B,
5- C- menstruation, 6- C- sucrose, 7-B- Euglenoids, 8-A- Microtubules
9- C- assembly, 10- C- Polysaccharides, 11- B- histology, 12- A- sporozoa,

3) Answer 3: (26 Marks two marks for each choice)

- 1- B-Sulphur, 2- A- centrioles, 3- A- has chloroplasts, 4- C- not branched,
5- ~~B~~ crustaceans, 6- A- producing vitamins, 7- C- Ciliates, 8- B- Starches,
9- B- Thymine, 10- D- cellulose, 11-A- jelly-like fluid, 12-C- Subphylum,
13- C-Sporozoa

4) Answer 4: (20 Marks one mark for each word):

- 1- Genetic, 2- Molecules, 3- Proteins, 4- Histones, 5- Chromatin,
6- Division, 7- Chromosomes, 8- Genome, 9- Mitochondria, 10- Fraction

5) Answer 5: (18 marks 3 mark for each correct connection):

- 1- F, 2- D, 3- A, 4- C, 5- B, 6- E

Dr. Ali A Mansour

25/1/2023



Final Exam of Animal Biology: 3rd Year Biology

Exams for Academic Year 2021- 2022: 2nd term

1) What are the five basic steps of virus Life cycle with explanation? (15 D)

2) Choose the most accurate answer of the following: (24 D)

- 1-The group of Protista that is a connecting link between animals and plants:
A- Dianoflagellates, B- Euglenoids, C- Chrysophytes, D- slime moulds
- 2- Polypeptides are chains of:
A- fatty acid, B- nucleic acid, C- amino acid, D- fructose.
- 3- Molecules that can act as glue to attach cells together:
A – Phospholipids, B- Cholesterol, C- Proteins, D- glycocalyx.
- 4- Cells responsible for transporting oxygen to cells are:
A- Red cells, B- lymphocytes, C- platelets, D- neutrophils.
- 5- The gradual deterioration of functional characteristic of most complex life forms is called: A-apoptosis, B-senescence, C-angiogenesis, D-conjugation.
- 6- The stage of embryo development that produces the three germ layers is:
A-organogenesis, B- fertilization, C- cleavage, D- gastrulation.
- 7- When the embryo splits during cleavage into two separate groups of cells, they are called ---- twins: A- Identical, B- fraternal, C- conjoined, D-multiple.
- 8- Conjoined twins might be:
A- two boys, B- two girls, C- a boy & a girl, D- A & B
- 9- Hollow rods that function primarily to help, support, and shape the cell :
A- Lysosomes, B- Microtubules, C- Centrioles, D- Golgi Complexes
- 10- Prokaryotes that live at very low temperatures are called:
A-Halophiles, B- Thermophiles, C- Psychrophiles, D- Acidophiles.
- 11- Starch is an example of : A- Monosaccharides, B- Polysaccharides
C- Disaccharides, D- vitamins
- 12- The branch of ecology that deals with the application of ecological concepts to meet human needs is : A- Applied ecology, B- Human ecology
C- Taxonomic ecology, D- Evolutionary ecology

12- Choose the wrong answer of the following: (26 D).

- 1- Lipids consist of the following atoms:
A- oxygen, B- hydrogen, C- carbon, D-Sulphur.
- 2- Eukaryotic plant cell contains the following structures:
A- Centrioles, B- Golgi Complex, C- Mitochondria, D- Cell wall.
- 3- Paramecium: A- moves by cilia, B- has contractile vacuole.
C-lives in marine water, D- has two nuclei.
- 4- From characteristics that define cardiac muscle cells are:
A-non-voluntary controlled, B- striated, C-not branched, D- single nucleated
- 5- Vertebrates include classes such as:
A- Reptiles, B- crustaceans, C- Aves, D- Amphibians

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- 6-Adipose cells have an endocrine function as:
 A-producing vitamins, B-producing hormones, C- insulin sensitivity, D- cell signalling.
- 7- A group moves with the help of flagella is:
 A- Dianoflagellates, B- Amoebae, C- Euglenoids, D-flagellates
- 8- Each of the following compounds is lipids:
 A- Waxes, B- Keratin, C- Steroids, D- Triglycerides
- 9- From RNA nucleotides is:
 A- Uracil, B- Thymine, C- Adenine, D- Guanine
- 10- Each of the following compounds is protein:
 A- cellulose, B- haemoglobin, C- enzymes, D- collagen.
- 11- Characteristics of nucleus include: A- jelly-like fluid, B- mostly rounded,
 C- double-membrane bound organelle, D- the largest organelle of the cell
- 12- Protozoa was considered in different ranks of taxonomy including:
 A- Subphylum, B- Subkingdom, C-Phylum, D- Kingdom
- 13- The class of protozoa that has locomotion organelles is:
 A- Flagellates, B-Ciliates, C- Amoebae, D- Sporozoa
- 13- Put the correct word from the following words in the suitable blank: (20 D)
 Disorder, Acid, Human, Ascorbic, Medical,
 Foods, Quantities, Deficiency, Synthesize, Essential,

Vitamins are a group of organic compounds that are present in minute amounts in natural --1--. Vitamins are --2-- to normal metabolism. If we do not take enough amount of any kind of vitamin, certain --3-- conditions can result. This is because the --4-- body either does not produce enough of them, or it does not produce any at all. Each organism has different vitamin requirements. For example, humans need to consume vitamin C, or --5-- --6--, but dogs do not. Dogs can produce, or --7--, enough amount of vitamin C for their own needs, but humans cannot. There are currently 13 recognized types of vitamins. Different vitamins have different roles, and they are needed in different --8--. --9-- of vitamin A may cause night-blindness and keratomalacia, an eye --10--, that results in a dry cornea.

5) Match the phrase in list (A) with its complemented phrase from List (B) (15):

(Just write the correct letter from list B in front of matching number from list A)

- List (A)**
- 1- Vitamins are a group of organic compounds that
 - 2- Cells also can be disassembled by chemical methods and their individual
 - 3- Photoreceptor cells are cells in the eye that detect light,
 - 4- A biological community consists of all the populations of
 - 5- Most freshwater amoebae have a contractile

- List (B)**
- A- vacuole which regulates the osmosis pressure.
 - B- and they are very specialised forms of neuron
 - C- different species that live in a given area
 - D- organelles and macro molecules isolated for study.
 - E- are present in minute amounts in natural foods

Best Wishes

Tartous 27/7/2022

Dr. Ali A Mansour

جامعة طرطوس

كلية العلوم

قسم علم الحياة

سلم تصحيح مقرر البيولوجيا الحيوانية لطلاب السنة الثالثة

د. علي منصور

الدورة الثانية- العام الدراسي 2021-2022

1) Answer 1 (15 D marks)

1. A virus particle attaches to a host cell. This is called “adsorption”.
2. The particle injects its DNA or RNA into the host cell. This is called “entry”.
3. The invading DNA or RNA takes over the cell and recruits the host cell’s enzymes to make new virus particles. This is called “replication”.
4. The particles of the virus created by the cell come together to form new viruses. This is called “assembly”
5. The newly formed viruses kill the cell so that they may break free and search for a new host cell. This is called “release”.

2) Answer 2: (24 Marks two marks for each choice)

- 1-B- Euglenoids, 2-C- amino acid, 3-D- glycocalyx, 4- A- Red cells,
5-B-senescence, 6- D- gastrulation, 7- A- Identical, 8- D- A &B,
9-B- Microtubules, 10- C- Psychrophiles, 11- B- Polysaccharides,
12- A- Applied ecology,

3) Answer 3: (26 Marks two marks for each choice)

- 1- D-Sulphur, 2- A- Centrioles, 3- C-lives in marine water, 4- C-not branched,
5- B- crustaceans, 6- A- producing vitamins, 7- B- Amoebae, 8-B- Keratin,
9- B- Thymine, 10- A- cellulose, 11-A- jelly-like fluid, 12-A- Subphylum,
13- D-Sporozoa

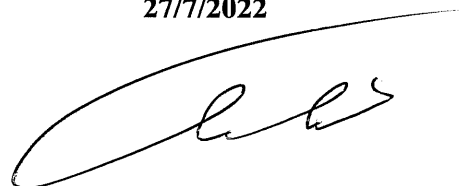
4) Answer 4: (20 Marks one mark for each word):

- 1- Foods, 2- Essential, 3- Medical, 4- human, 5- ascorbic,
6- acid, 7- synthesize, 8- quantities, 9- Deficiency, 10- disorder

5) Answer 5: 1- E, 2- D, 3- B, 4- C, 5- A

Dr. Ali A Mansour

27/7/2022



Final Exam of Animal Biology/ 3rd Year Biology

Exams for Academic Year 2021- 2022: 1st term

- 1) **Proteins embedded in cell membrane serve different functions. Mention types of these proteins and explain one of them?** (15 D)
- 2) **Choose the most accurate answer of the following:** (24 D)
- 1- Polypeptides are chains of:
A-fatty acid, B- amino acid, C- nucleic acid, D- fructose.
 - 2- Molecules that can act as glue to attach cells together:
A – Phospholipids, B- Cholesterol, C- glycocalyx, D- Proteins.
 - 3- Cells that help to clot blood and prevent excessive blood loss are:
A- Red cells, B- lymphocytes, C- platelets, D- neutrophils.
 - 4- A method of reproduction in bacteria is often regarded as equivalent of sexual reproduction called: A-apoptosis, B-senescence, C-angiogenesis, D-conjugation.
 - 5- The stage of embryo development that the form organs in their proper locations is:
A-organogenesis, B- fertilization, C- cleavage, D- gastrulation.
 - 6- When the twins born attached one to another, they are called ---- twins
A- Identical, B- fraternal, C- conjoined, D- multiple.
 - 7- Conjoined twins might be:
A- two boys, B- two girls, C- a boy & a girl, D- A & B
 - 8- Hollow rods that function primarily to help, support, and shape the cell:
A- Microtubules, B- Lysosomes, C- Centrioles, D- Golgi Complexes
 - 9- The stage at which particles of the virus created by the cell come together to form new viruses: A- entry, B- adsorption, C- assembly, D- replication.
 - 10- Chitin is an example of : A- Monosaccharides, B- Disaccharides
C- Polysaccharides, D- vitamins
 - 11- The branch of ecology that deals with the application of ecological concepts to meet human needs is : A- Taxonomic ecology, B- Human ecology
C- Applied ecology, D- Evolutionary ecology
 - 12- The group of Protista that has an appearance of various colours is:
A- Diatomeflagellates, B- Euglenoids, C- Chrysophytes, D- slime moulds
- 3) **Choose the wrong answer of the following:** (26 D).
- 1- Lipids consist of the following atoms:
A- Sulphur, B- hydrogen, C- carbon, D- oxygen.
 - 2- Eukaryotic animal cell contains the following structures:
A- Centrioles, B- Golgi Complex, C- Mitochondria, D- Cell wall.
 - 3- Paramecium: A- moves by cilia, B- has two nuclei,
C-lives in fresh water, D- has chloroplasts.
 - 4- From characteristics that define smooth muscle cells are:
A-non-voluntary controlled, B- striated, C-not branched, D- single nucleated
 - 5- Vertebrates include classes such as:
A-Insects, B-Reptiles, C- Aves, D- Amphibians

Next page 

- 6-Adipose cells have an endocrine function as: A-producing hormones, B- producing vitamins, C- insulin sensitivity, D- cell signalling.
- 7- A group moves with the help of flagella is: A- Dianoflagellates, B- flagellates, C- Euglenoids, D- Ciliates
- 8- Each of the following compounds is lipids: A- Keratin, B- waxes, C- Steroids, D- Triglycerides
- 9- From DNA nucleotides is: A- Uracil, B- Thymine, C- Adenine, D- Guanine
- 10- Each of the following compounds is protein: A- collagen, B- haemoglobin, C- enzymes, D- cellulose.
- 11- Some characteristics of nucleus: A- jelly-like fluid, B- mostly rounded, C- double-membrane bound organelle, D- the largest organelle of the cell
- 12- Protozoa was considered in different ranks of taxonomy including: A- Kingdom, B- Subkingdom, C-Phylum, D- Subphylum
- 13- The class of protozoa that has locomotion organelles is: A- Flagellates, B-Ciliates, C- Sporozoa, D- Amoebae
- 4) Put the correct word from the following words in the suitable blank: (20 D)

Cleavage, Intracellular, Blastomeres, oviduct, morula, embryo, blastula, uterine, junctions, Mitosis

The second major event in animal development is rapid --1-- dividing of the zygote, during passing down the --2--, resulting in a large number of small cells. Eventually, a solid ball of cells is produced, known as the --3-- stage (16 cells). This division process is called --4-- Cleavage is a periodic series of cell division that does not increase the size of the --5-- but produce smaller cells called---6-- The outermost blastomeres join by tight --7--, and Na^+ pumped into the --8-- space creates an osmotic gradient, bringing in water and creating a hollow ball of cells called a --9-- which implants in the --10-- lining when it reaches the uterus.

5) Match the phrase in list (A) with its complemented phrase from List (B) (15):

(Just write the correct letter from list B in front of matching number from list A)

- List (A)**
- 1- Vitamins are a group of organic compounds that
 - 2- Cells also can be disassembled by chemical methods and their individual
 - 3-Photoreceptor cells are cells in the eye that detect light,
 - 4- A biological community consists of all the populations of
 - 5- Most freshwater amoebae have a contractile

- List (B)**
- A-vacuole which regulates the osmosis pressure.
 - B- and they are very specialised forms of neuron
 - C- different species that live in a given area
 - D- organelles and macromolecules isolated for study.
 - E- are present in minute amounts in natural foods

Best Wishes

Tartous 20/1/2022

Dr. Ali A Mansour



اسم الطالب:
المدة: ساعتان
الدرجة: 100

جامعة طرطوس
كلية العلوم
قسم علم الحياة

الامتحان النظري لمقرر بيولوجيا حيوانية (إنكليزي)
لطلاب السنة الثالثة- الدورة الفصلية الثانية 2020 – 2021

- 1) What are the six characteristics of life? Explain any one of them? (15 D)
- 2) Choose the most accurate answer of the following: (24 D)
- 1- The ability of an organism to maintain a constant internal environment in response to environmental changes is: A- Gene Theory, B- Homeostasis, C- Thermodynamics, D- Evolution.
 - 2- Studying external features such as body parts or features of the skin is called: A- Histology, B- Anatomy, C- Morphology, D- Microbiology.
 - 3- Protein molecules consist of polypeptide chains of: A- fatty acid, B- amino acid, C- nucleic acid, D- fructose.
 - 4- Adaptations are not seen from the outside and need laboratory studies called: A- Structural, B- Physiological, C- Behavioural, D- A&C.
 - 5- Sucrose is an example of: A- Monosaccharides, B- Disaccharides, C- Polysaccharides, D- vitamins
 - 6- immune cells engulf bacteria and viruses, and change their shape to 'swallow' them are: A- neutrophils, B- lymphocytes, C- platelets, D- red cells.
 - 7- Cancer cells lose the ability to undergo programmed cell death or what is called: A- Angiogenesis, B- senescence, C- apoptosis, D- conjugation.
 - 8- The stage of embryo development that creates the three primary germ layers of animal embryos is: A- organogenesis, B- fertilization, C- cleavage, D- gastrulation.
 - 9- Twins result from fertilization of two separate eggs by two different sperms are called: A- Identical, B- fraternal, C- conjoined, D- multiple.
 - 10- Conjoined twins might be: A- a boy & a girl, B- two boys, C- two girls, D- B & C
 - 11- Cell components that organize the assembly of microtubules during cell division: A- Mitochondria, B- Lysosomes, C- Centrioles, D- Golgi Complexes
 - 12- The stage at which the particle of virus injects its DNA or RNA into the host cell is: A- entry, B- adsorption, C- assembly, D- replication.
- 3) Choose the wrong answer of the following: (26 D).
- 1- Paramecium: A- has the pellicle, B- moves by flagella, C- lives in fresh water, D- has two nuclei.
 - 2- Lipids consist of the following atoms: A- carbon, B- hydrogen, C- oxygen, D- nitrogen
 - 3- Prokaryotic cell contains the following structures: A- Centrioles, B- ribosomes, C- cytoplasm, D- Cell wall.
 - 4- Some characteristics that define skeletal muscle cells are: A- voluntary controlled, B- striated, C- branched, D- single nucleated
 - 5- An example of organelle is: A- Mitochondrion, B- Protein, C- Golgi complex, D- Lysosome.
 - 6- Adipocytes have an endocrine function such as: A- cell signalling, B- producing hormones, C- producing vitamins, D- insulin sensitivity.

Next page →

- 7- Advantages of the renewal properties of stem cells enable scientists in utilizing them to generate cells for: A- tumour suppression, B- organ transplantation, C- treatment of disease, D- tissue repair.
- 8- Each of the following compounds is type of Carbohydrates:
A- Starch, B- waxes, C- Chitin, D- cellulose
- 9- DNA nucleotides contain one of four different nitrogenous bases:
A- Uracil, B- Thymine, C- Adenine, D- Guanine
- 10- Some characteristics of nucleus: A- mostly rounded, B- semi-permeable, C- double-membrane bound organelle, D- the largest organelle of the cell
- 11- Protozoa was considered in different ranks of taxonomy including:
A- Subphylum, B- Subkingdom, C- Phylum, D- Kingdom
- 12- The class of protozoa that has locomotion organelles is:
A- Sporozoa, B- Flagellates, C- Ciliates, D- Amoeboe
- 13- Each of the following compounds is protein:
A- haemoglobin, B- Enzymes, C- A and B, D- Glycogen
- 4) Put the correct word from the following words in the suitable blank: (20 D)
Molecule, fatty, bilayer, hydrophobic, head, structure, tail, phosphate, mingle, hydrophilic

Phospholipids make up the basic --1-- of a cell membrane. A single phospholipid --2-- has two different ends: a --3-- and a --4--. The head end contains a --5-- group and is --6--; this means that it likes or is attracted to water molecules. The tail end is made up of two strings of hydrogen and carbon atoms called --7-- acid chains; These chains are --8-- , or do not like to --9-- with water molecules. The phospholipids of a cell membrane are arranged in a double layer called the lipid --10--.

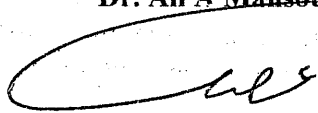
- 5) Match the phrase in list (A) with its complemented phrase from List (B) (15):
(Just write the correct letter from list B in front of matching number from list A)

- | | |
|--|--|
| 1- Vitamins are a group of organic compounds that are present | A- because their cells would only be able to obtain energy from anaerobic respiration. |
| 2- As an adaptation to life on dry land, | B- in minute amounts in natural foods. |
| 3- Some immune cells engulf bacteria and viruses, | C- normal cells that enable them to divide uncontrollably. |
| 4- Cancer results from the development of abnormal properties in | D- so they need to change their shape to 'swallow' them |
| 5- Without mitochondria, higher animals would likely not exist | E- amniotic species develop several extraembryonic membranes. |

Best Wishes

Tartous 12/8/2021

Dr. Ali A Mansour



جامعة طرطوس

كلية العلوم

قسم علم الحياة

سلم تصحيح مقرر البيولوجيا الحيوانية لطلاب السنة الثالثة

د. علي منصور

الدورة الثانية- العام الدراسي 2020 - 2021



1) Answer 1 (15 D two marks for each one and three marks for any explanation):

- 1- Life is ordered, 2- Life can work, 3- Life grows and develops, 4- Life can respond,
5- life can reproduce, 6- life can adapt
Explaining any one of those (3)..

2) Answer 2: (24 Marks two marks for each choice)

- 1- B- Homeostasis, 2- C- Morphology, 3- B- amino acid, 4- B-Physiological,
5- B- Disaccharides, 6- A- neutrophils, 7- C - apoptosis, 8- D- gastrulation,
9- B- fraternal, 10- D- B & C, 11- C-Centrioles, 12- A- entry

3) Answer 3: (26 Marks two marks for each choice)

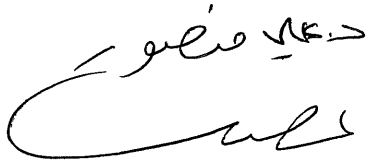
- 1- B- moves by flagella, 2-D- nitrogen, 3- A-Centrioles,
4- C- branched or D- single nucleated, 5- B- Protein, 6 - Producing vitamins,
7- A- tumour suppression, 8- B- waxes, 9- A- Uracil, 10- B- semi-permeable,
11 - A-Subphylum, 12- A-Sporozoa, 13- D-Glycogen

4) Answer 4: (10 Marks one mark for each word):

- 1- structure, 2- molecule, 3- head, 4- tail, 5- phosphate, 6- hydrophilic,
7- fatty, 8- hydrophobic, 9- mingle, 10- bilayer.

5) Answer 5: (15 D 3 marks for each one):

- 1- B, 2- E, 3- D, 4- C, 5- A





مكتبة
A to Z

2020 - 2019

University of Tartous
Faculty of Sciences
Department of Biology

الفصل الثاني
بيولوجيا حيوانية
سنة الثالثة علوم

Name:
Mark: 100
Time: 2 hours

Final Exam of Animal Biology: 3rd Year Biology

Exams for Academic Year 2019- 2020: 2nd term

- 1) What are the principles of biology? Explain any one of them? (15 D)
- 2) Choose the most accurate answer of the following: (24 D)
 - 1- The biological process by which new individuals are produced is called:
A- Reproduction, B- Evolution, C- Thermodynamics, D- Adaptation.
 - 2- The study of microscopic organisms is called:
A- Microbiology, B- Anatomy, C- Embryology, D- Histology.
 - 3- Prokaryotes that live at very high temperatures ($>100^{\circ}\text{C}$) are called:
A- Halophiles, B- Thermophiles, C- Psychrophiles, D- Acidophiles.
 - 4- The environment of an organism shapes its appearance through ----- adaptations.
A- Physiological, B- Structural, C- Behavioural, D- None of these.
 - 5- The ----- can act as a glue to attach cells together.
A- Glycocalyx, B- Cholesterol, C- Phospholipids, D- Proteins.
 - 6- Blood cells that help to clot blood and prevent excessive blood are:
A- Red cells, B- lymphocytes, C- platelets, D- neutrophils.
 - 7- Cancer cells lose the ability to undergo programmed cell death or what is called:
A- angiogenesis, B- apoptosis, C- fertilization, D- senescence.
 - 8- The stage of embryo development that produces the three germ layers is:
A- gastrulation, B- fertilization, C- cleavage, D- organogenesis.
 - 9- Twins result from fertilization of two separate eggs by two different sperms are:
A- Identical, B- fraternal, C- conjoined, D- multiple.
 - 10- Identical twins might be:
A- two boys, B- two girls, C- a boy & a girl, D- A & B
 - 11- Cell components that generate energy for the cell are:
A- Centrioles, B- Lysosomes, C- Mitochondria, D- Golgi Complexes
 - 12- The stage at which a virus particle attaches to a host cell is called:
A- entry, B- adsorption, C- assembly, D- replication
- 3) Choose the wrong answer of the following: (26 D)
 - 1- Eukaryotic animal cell contains the following structures:
A- Cell wall, B- endoplasmic reticulum, C- Mitochondria, D- Centrioles.
 - 2- Paramecium: A- contains two nuclei, B- contains contractive vacuole,
C- moves by flagella, D- lives in fresh water
 - 3- An example of organelle is:
A- Mitochondrion, B- Peroxisome, C- Protein, D- Lysosome.
 - 4- Senescent cells are known to play important physiological functions in:
A- tumour suppression, B- sexual reproduction,
C- wound healing, D- embryonic development.
 - 5- Adipose cells have an endocrine function as:
A- cell signalling,
B- producing vitamins, C- producing hormones, D- insulin sensitivity
 - 6- Each of the following compounds is carbohydrates:
A- Waxes, B- Starch, C- Chitin, D- Cellulose

Next page

- 7- Nitrogenous bases that form RNA nucleotides are:
A- Adenine, B- Thymine, C- Uracil, D- Guanine
- 8- Each of the following compounds is protein:
A- Enzymes, B- haemoglobin, C- Steroids, D- B and C
- 9- Some functions of the skin: A- prevents dehydration, B- clots blood,
C- Produces vitamins, D- stores fat.
- 10- A group of protists which has locomotion organelles is:
A- Dianoflagellates, B- Chrysophytes, C- Euglenoids, D- Protozoans
- 11- Protozoa was considered in different ranks of taxonomy including:
A- Phylum, B- Subphylum, C- Kingdom, D- Subkingdom
- 12- The class of protozoa that has locomotion organelles is:
A- Flagellates, B- Sporozoa, C- Ciliates, D- Amoebae
- 13- Arthropods is an animal phylum that includes the following classes:
A- Aves, B- arachnids, C- insects, D- myriapods.

- 4) Put the correct word from the following words in the suitable blank: (20 D)
replicate, aged, immunogenic, biological, maturation, deterioration,
mortality, cellular, state, cease.

Senescence or --1-- ageing is the gradual --2-- of functional characteristic of most complex life forms that, on the level of the organism, increases --3-- after --4--. The word "senescence" can refer either to --5-- senescence or to senescence of the whole organism.

Cellular senescence is the phenomenon by which normal diploid cells --6-- to divide. Cellular senescence represents a change in "cell --7--" rather than a cell becoming "--8--" as the name confusingly suggests.

Although senescent cells can no longer --9--, they remain metabolically active and commonly adopt an --10-- phenotype.

- 5) Match the phrase in list (A) with its complementary phrase from List (B) (15):
(Just write the correct letter from list B in front of matching number from list (A))

List (A)	List (B)
1- As an adaptation to life on dry land,	A- times in order to replenish and repair tissue.
2- Stem cells are able to divide and replicate many	B- exist because their cells would only be able to obtain energy from anaerobic respiration.
3- Without mitochondria, higher animals would likely not	C- arranged in a double layer called the lipid bilayer.
4- Some immune cells engulf bacteria and viruses,	D- amniotic species develop several extraembryonic membranes.
5- The phospholipids of a cell membrane are	E- so they need to change their shape to 'swallow' them.

Best Wishes

Tartous 6/9/2020

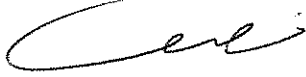
Dr. Ali A Mansour



سلم تصحيح مقرر البيولوجيا الحيوانية لطلاب السنة الثالثة

د. علي منصور

الدورة الثانية - العام الدراسي 2019 - 2020



- 1) Answer 1 (15 D three marks for each one (of four) and three marks for any explanation: required just 4 principles and one explanation):

The cell theory, 2- gene theory, 3- evolution, 4- homeostasis, and 5- laws of thermodynamics.

- 1- Cell Theory: all living organisms are composed of cells. The cell is the basic unit of life.
- 2- Gene Theory: traits are inherited through gene transmission. Genes are located on chromosomes and consist of DNA.
- 3- Evolution: it is any genetic change in a population that is inherited over several generations. These changes may be small or large, noticeable or not so noticeable.
- 4- Homeostasis: it is ability of an organism to maintain a constant internal environment in response to environmental changes.
- 5- Thermodynamics: energy is constant and energy transformation is not completely efficient.

- 2) Answer 2: (24 Marks two marks for each choice)

- 1- A- Reproduction, 2- A- Microbiology, 3- B- Thermophiles, 4- B- Structural,
- 5- A- glycocalyx, 6- C- platelets, 7- B- apoptosis, 8- A- Gastrulation, 9- B- fraternal ,
- 10- D- A & B, 11- C- Mitochondria, 12- B- adsorption.

- 3) Answer 3: (26 Marks two marks for each choice)

- 1-A-Cell wall, 2- C-moves by flagella, 3- C - Protein, 4- B- sexual reproduction,
- 5- A- cell signalling, 6- A- waxes, 7- B- Thymine, 8- C- Steroids, 9- B- clots blood,
- 10- B-Chrysophytes, 11- B- Subphylum, 12- B-Sporozoa, 13- A-aves

- 4) Answer 4: (20 Marks one mark for each word):

- 1- biological, 2- deterioration, 3- mortality, 4- maturation, 5- cellular, 6- cease,
- 7- state, 8- aged, 9- replicate, 10- immunogenic.

- 5) 1- D, 2- A, 3- B, 4- E, 5- C

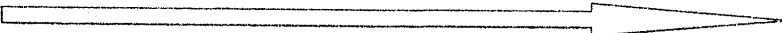
الأحد 6/9/2020

(15 D) three marks
for each choice

Final Exam of Animal Biology: 3rd Year Biology

Exams for Academic Year 2019- 2020: 1st term

- 1) What are the six characteristics of life? Explain any one of them? (15 D)
- 2) Choose the most accurate answer of the following: (24 D)
- 1- Energy is constant and its transformation is not completely efficient, and this is called: A- Homeostasis, B- Evolution, C- Thermodynamics, D- Adaptation.
 - 2- The fine study of different body tissues is called:
A- Histology, B- Anatomy, C- Embryology, D- Microbiology.
 - 3- Prokaryotes that live at very high concentrations of salt (NaCl) are called:
A- Halophiles, B- Thermophiles, C- Psychrophiles, D- Acidophiles.
 - 4- Adaptations that affect how an organism acts are called ----- adaptations.
A- Structural, B- Physiological, C- Behavioural, D- None of these.
 - 5- Cellular respiration has---- main stages: A- three, B- two, C- five, D- four.
 - 6- The ----- can act as a glue to attach cells together.
A - Phospholipids, B- Cholesterol, C- glycocalyx, D- Proteins.
 - 7- Blood cells that determine blood type and are also responsible for transporting oxygen to cells are: A- Red cells, B- lymphocytes, C- platelets, D- neutrophils.
 - 8- Cancer cells lose the ability to undergo programmed cell death or what is called:
A- fertilization, B- senescence, C- angiogenesis, D- apoptosis.
 - 9- The stage of embryo development that produces the three germ layers is:
A- gastrulation, B- fertilization, C- cleavage, D- organogenesis.
 - 10- Twins result from fertilization of two separate eggs by two different sperms are:
A- Identical, B- fraternal, C- conjoined, D- multiple.
 - 11- Fraternal twins might be:
A- two boys, B- two girls, C- a boy & a girl, D- all choices right
 - 12- It deals with the application of ecological concepts to meet human needs:
A- Human ecology, B- Evolutionary ecology, C- Applied ecology, D- Ethology.
- 3) Choose the wrong answer of the following: (26 D)
- 1- prokaryotic cell contains the following structures:
A-cell membrane, B- Cilia, C- Endoplasmic Reticulum, D- Chromosomes.
 - 2- Eukaryotic animal cell contains the following structures:
A- Centrioles, B- Golgi Complex, C- Mitochondria, D- Cell wall.
 - 3- Paramecium: A- moves by cilia, B- contains contractive vacuole,
C-lives in salt water, D- contains two nuclei.
 - 4- An example of organelle is:
A- Mitochondrion, B- Protein, C- Golgi complex, D- Lysosome.
 - 5- Senescent cells are known to play important physiological functions in:
A- sexual reproduction, B- tumour suppression,
C- wound healing, D- embryonic development.
 - 6- Adipose cells have an endocrine function as: A- producing hormones,
B- producing vitamins, C- insulin sensitivity, D- cell signalling.

Next page 

- 7- Each of the following compounds is carbohydrates:
A- Starch, B- waxes, C- Chitin, D- Cellulose
- 8- DNA nucleotides contain one of four different nitrogenous bases:
A- Uracil, B- Thymine, C- Adenine, D- Guanine
- 9- Each of the following compounds is protein:
A- Enzymes, B- haemoglobin, C- Steroids, D- A and B
- 10- Some functions of the skin: A- prevents dehydration, B- stores fat,
C- Produces vitamins, D- clots blood
- 11- A group of protists which has locomotion organelles is:
A- Chrysophytes, B- Dinoflagellates, C- Euglenoids, D- Protozoans
- 12- Protozoa was considered in different ranks of taxonomy including:
A- Subphylum, B- Phylum, C- Subkingdom, D- Kingdom
- 13- The class of protozoa that has locomotion organelles is:
A- Flagellates, B- Sporozoa, C- Ciliates, D- Amoebae
- 4) Put the correct word from the following words in the suitable blank: (20 D)
reproductive, sunlight, orientation, exposure, locusts,
terrestrial, gonad, protective, gear, accelerate

There are many examples that show direct effect of light on animals. --1--- colouration and mimicry are well known in ---2--- animals. They do not occur in the absence of light. Blind cave amphibians and fish developed colour after ---3--- to the day light.

---4--- and behaviour of animals are also known to be affected by light, ---5--- stop their flight on a cloudy day. Birds use ---6--- as means for their orientation and migration, and their ---7--- activities are also affected by light. In temperate regions, light tend to ---8--- the reproduction of the whole community. In many animals, light is necessary for the activation of---9---. In some cases, like salmon larvae, light has been found to ---10--- the development whereas in *Mytilus* it retards the development.

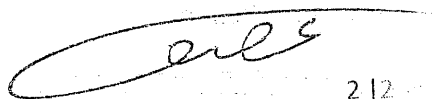
- 5) Match the phrase in list (A) with its complementary phrase from List (B) (15):
(Just write the correct letter from list B in front of matching number from list A)

List (A)	List (B)
1- As an adaptation to life on dry land,	A-times in order to replenish and repair tissue.
2- Stem cells are able to divide and replicate many	B- exist because their cells would only be able to obtain energy from anaerobic respiration.
3-Some immune cells engulf bacteria and viruses,	C- arranged in a double layer called the lipid bilayer.
4- The phospholipids of a cell membrane are	D- so they need to change their shape to 'swallow' them
5- Without mitochondria, higher animals would likely not	E- amniotic species develop several extraembryonic membranes.

Best Wishes

Tartous 2/2/2020

Dr. Ali A Mansour



جامعة طرطوس

كلية العلوم

قسم علم الحياة

سلم تصحيح مقرر البيولوجيا الحيوانية لطلاب السنة الثالثة

د. علي منصور

الدورة الأولى- العام الدراسي 2019-2020

1) Answer 1 (15 D two marks for each one and three marks for any explanation):

- 1- Life is ordered, 2- Life can work, 3- Life grows and develops, 4-Life can respond, 5- life can reproduce, 6- life can adapt
Explaining any one of those (3).
- Life is ordered.** Organisms have an enormously complex organization, and the basic unit of all complex systems of life, is the cell.
 - Life can work.** Living creatures can take in energy from the environment. This energy, in the form of food, is transformed to maintain metabolic processes and for survival.
 - Life grows and develops.** This means living organisms are not just getting larger in size, but also they have the ability to rebuild and repair themselves when they are injured.
 - Life can reproduce.** Reproduction is a fundamental feature of all known life, and life can only come from living creatures. **Reproduction** is the biological process by which new individual organisms (offspring)— are produced from their parents.
 - Life can respond.** All living organisms respond to their environment. When someone accidentally strikes his toe, almost instantly, he withdraws in pain.
 - Finally, **life can adapt.** An **adaptation** refers to a process by which an **organism becoming adjusted** to the demands placed on it by the environment.

2- Answer 2: (24 Marks two marks for each choice)

- 1- C- Thermodynamics, 2-A- Histology, 3- A- Halophiles, 4- C- Behavioural,
5- A- three, 6- C- glycocalyx, 7- A- Red cells, 8- D- apoptosis, 9- A- Gastrulation,
10- B- fraternal , 11- D- all choices right, 12- C- Applied ecology .

3- Answer 3: (26 Marks two marks for each choice)

- 1-C- Endoplasmic Reticulum, 2- D- Cell wall, 3- C-lives in salt water, 4-B- Protein,
5- A- sexual reproduction, 6- D- cell signalling, 7- B- waxes, 8- A- Uracil, 9- C- Steroids,
10- D- clots blood, 11- A- Chrysophytes, 12- ^{A- all} Subphylum, 13- B-Sporozoa

4- Answer 4: (20 Marks ^{one + two} ~~one~~ marks for each word):

- 1- protective, 2- terrestrial, 3- exposure, 4- orientation, 5- locusts, 6- sunlight,
7- reproductive, 8- gear, 9- gonad, 10- accelerate .
- 5- 1- E, 2- A, 3- D, 4- C, 5- B (two marks For each Answer)

Quiz model

Answer the following questions

1) Recent advances in cell biology are enabling cell biologists to do what? (D).

2) Choose the most accurate answer of the following ():

- 1- The ability to maintain a constant internal environment in response to environmental changes is called:
A- Homeostasis, B- Evolution, C- Thermodynamics, D- Adaptation.
- 2- Living creatures can take in energy from the environment. This means life can:
A- adapt, B- reproduce, C- work, D- respond.
- 3- The adaptation in which desert foxes have large ears for heat radiation and Arctic foxes have small ears to retain body heat is called:
A- Structural, B- physiological, C- behavioural, D- none of these.
- 4- The integrated study of the enormous variety of animal life on Earth, and studying different functions of animals is called:
A- Zoology, B- Microbiology, C- Animal biology, D- Anatomy.
- 5- On average, eukaryotic cells are about ---- larger in diameter than prokaryotic cells: A- 5 times, B- 10 times, C- 20 times, D- 100 times.
- 6- In eukaryotes, most cellular respiration reactions take place within the:
A-cytoplasm, B- cell membrane, C- mitochondria, D- Golgi Complex.
- 7- A network of fibers throughout the cytoplasm that gives the cell its support and helps to maintain its shape is called:
A- Cell membrane, B- Centriole, C- Microtubule, D- Cytoskeleton.
- 8- Blood cells that determine blood type and are also responsible for transporting oxygen to cells are: A- Red cells, B- lymphocytes, C- platelets, D-neutrophils.
- 9- The outer segment of Photoreceptor cell is now known to be a highly modified kind of primary: A- cilium, B- flagellum, C-neuron, D- membrane.
- 10- The stripes in skeletal muscle cells are caused by the regular arrangement of actin and ---- proteins: A- nucleic, B- myosin, C- epithelial, D- active.
- 11- Cancer cells lose the ability to undergo ---- or programmed cell death:
A- fertilization, B- apoptosis, C- angiogenesis, D- senescence.

3) Choose the wrong answer of the following (D):

- 12- Examples of an organelles are the following except:
A- mitochondrion, B- Golgi Complex, C- Lysosome, D- protein.
- 13- Golgi apparatus is responsible for ---- certain cellular products:
A- manufacturing, B-digesting, C- storing, D- shipping.
- 14- Scientists use a number of techniques to probe the mysteries of the animal cell such as: A- optical microscope, B- electronic microscope,
C- cell fractionation, D- organ transplantation.
- 15- Plant cells are more similar in size and their shapes are typically:
A- rectangular, B- cube, C- both A and B, D- none of these.
- 16- Senescent cells are known to play important physiological functions in:
A- tumour suppression, B- wound healing,
C- sexual reproduction, D- embryonic development.

17- Four characteristics define smooth muscle tissue cells. They are:

A- involuntarily controlled, B- not striated, C- not branched, D- multinucleated.

18- Scientists are attempting to take advantage of the renewal properties of stem cells by utilizing them to generate cells for:

A- blood regulation,
B- tissue repair, C- organ transplantation, D- disease treatment.

19- Adipose cells have an endocrine function as:

A- producing hormones,
B- producing vitamins, C- insulin sensitivity, D- cell signalling,

20- The skin:

A- prevents dehydration, B- stores fat,
C- produces vitamins, D- clots blood.

4) Put the correct word from the following list in the suitable blank (D):

....1.... is a rod-shaped organelle that can be considered the power generator of the cell, converting2... and3... into adenosine triphosphate (ATP). ATP is the chemical energy "currency" of the cell that powers the cell's ..4.... activities. This process is called ...5... **respiration** and is the reason animals ...6... oxygen. Without mitochondria, higher animals would likely not exist because their cells would only be able to obtain energy from ..7... respiration, a process much less ...8... than aerobic respiration.

Theoretical Exam of Animal Biology: 3rd Year Biology (Microbiology Branch)

Exams for Academic Year 2015- 2016: 1st term

- 1) What are the five basic principles of biology? Explain any one of them (10 Marks).
2) Choose the correct answer of the following (10 Degrees):

- 1- Xenophyophores are single-celled foraminifera whose shells can reach ---- in diameter. A- 20 nm, B- 20 μ m C- 20 mm, D-20 cm
- 2- The fine study of different body tissues is:
A- Histology, B- Anatomy, C- Embryology, D- Microbiology.
- 3- The ---- is a thin layer supporting the cell membrane in various protozoa, and it is formed from alveoli. A- Pellicle, B- vesicle, C- vacuole, D- lysosome.
- 4- A unicellular prokaryotic microorganism that is neither plant nor animal and it reproduces by scissiparity is: A-Virus, B- Bacterium, Paramecium, D- Euglena.
- 5- Cellular respiration has-----main stages: A-two, B- three, C-four, D- five.

- 3) Choose the wrong answer of the following (10 Degrees):

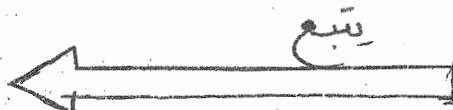
- 1- Prokaryotic cell contains the following structures:
A-cell membrane, B- Cilia, C- Endoplasmic Reticulum, D- Chromosomes.
- 2- Eukaryotic cell contains the following structures:
A- Centrioles, B- Cell wall, C- Golgi Complex, D- Mitochondria.
- 3- Structures of locomotion in protozoan microorganism are:
A -- Cilia, B-Flagella, Pseudo pods, D- Ribosomes.
- 4- The shells of testate amoebae may be composed of various substances, including:
A- Calcium, B- Potassium, C- Silica, D- Chitin.
- 5- Bacteria have a number of shapes as: A- spheres, B- rods, C- triangles, D- spirals.

- 4) Put only five of six following words in the suitable blanks (10 Degrees):

micronemes, organelle, cytoskeletal, microtubules, invade, secretory.
The apical complex consists of cytoskeletal and secretory --1-- forming a --2--, polar wings that fix the cytoskeletal --3--, two apical rings, and secretory vesicles known as --4-- and rhoptries. The apical complex enables Sporozoans to --5-- the host cells.

- 5) Match between phrases in list (A) and list (B) to form correct sentences (10 Degrees):

- | List (A) | List (B) |
|---|--|
| 1- An amoeba is a type of cell or organism which has the ability to | A-containing many layers of peptidoglycan and teichoic acids. |
| 2-Psychrophiles archaea: prokaryotes that | B-is highly folded and fills most of the cell. |
| 3- Gram-positive bacteria possess a thick cell wall | C-alter its shape, primarily by extending and retracting pseudopods. |
| 4- in many photosynthetic bacteria the plasma membrane | D- of nucleic acid (DNA or RNA) encapsulated in a protein coat. |
| 5-Viruses are supramolecular complexes | E- live at very low temperatures (-10°C). |
| | F-live in acidic environments. |



2

6 - Choose the correct answer (24 degrees):

a- Mature forms of Plasmodium are:

- 1- nonmotile 2- motile 3- movable

b- All enzymes require:

- 1- coenzymes 2- cofactors 3- both are wrong

c- Glucose+ fructose produces:

- 1-maltose 2-cellulose 3-sucrose

d- The envelopes that surround viruses are derived from:

- 1- host cell membrane 2-host DNA 3-viruses membranes

e- Hepatitis B viruses are killed by:

- 1-sterilization 2-glutaraldehyde 3-X-rays

f- In the classification of viruses we used:

- 1-host sp. 2-host type 3-host range

7- When the protective cysts are unnecessary (6 degrees).

8- Identify the following terms (12 degrees):

Microbial colony, Cysteine, Polymorphic protozoa.

9- What are the functions of the following terms (8 degrees).

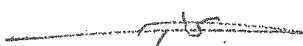
Sterilization, Starch.

21-1-2016

Our best wishes

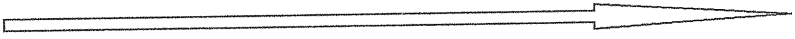
Dr. Cathrine R. Mansour

Dr. Ali Mansour



Exam of Animal Biology: 3rd Year Biology (Chem-biology Branch)
Exams for Academic Year 2016- 2017: 1st term

- 1) What are different functions of proteins embedded in the cell membrane? (10 D)
- 2) Choose the most accurate answer of the following: (12 D)
- 1- The study of internal structures such as forms of brain and heart is called:
A- Histology, B- Anatomy, C- Embryology, D- Microbiology.
 - 2- On average, eukaryotic cells are about ---- larger in diameter than prokaryotic cells: A- 5 times, B- 10 times, C- 20 times, D- 100 times.
 - 3- The type of adaptations in which desert foxes have large ears for heat radiation and Arctic foxes have small ears to retain body heat is called----- adaptation:
A- Physiological, B- Structural, C- Behavioural, D- None of these.
 - 4- The stripes in skeletal muscle cells are caused by the regular arrangement of actin and ---- proteins: A- nucleic, B- myosin, C- epithelial, D- active.
 - 5- Notably, protozoans locomote, but it is only via ---- means, in effect, using cilia, flagella, and pseudopodia.
A- Nonmuscular, B- muscular, C- vesicular, D- molecular.
 - 6- The ability to maintain a constant internal environment in response to environmental changes is called:
A- Homeostasis, B- Evolution, C- Thermodynamics, D- Adaptation.
- 3) Choose the wrong answer of the following: (12 D)
- 1- Plant cells are more similar in size and their shapes are typically:
A- rectangular, B- cube, C- both A and B, D- none of these.
 - 2- Four characteristics define cardiac muscle tissue cells. they are:
A- involuntary controlled, B-not striated, C- branched, D-single nucleated.
 - 3- Scientists use a number of techniques to probe the mysteries of the animal cell such as: A- optical microscope, B- electronic microscope,
C- cell fractionation, D- organ transplantation.
 - 4- Golgi apparatus is responsible for ---- certain cellular products:
A- manufacturing, B-digesting, C- storing, D- shipping.
 - 5- Senescent cells are known to play important physiological functions in:
A- tumour suppression, B- wound healing,
C- sexual reproduction, D- embryonic development.
 - 6- Examples of an organelles are the following except:
A- Mitochondrion, B- Protein, C- Golgi complex, D- Lysosome.
- 4) Put the correct word from the following words in the suitable blank: (16 D)
- specialized, replicate, treatment, unspecialized, tissue , replenish, renewal, generate.
- Stem cells are unique cells of the body in that they are --1-- and have the ability to develop into --2-- cells for specific organs or to develop into tissues. They are able to divide and --3-- many times in order to --4-- and repair --5-- . In the field of stem cell research, scientists are attempting to take advantage of the --6-- properties of stem cells by utilizing them to --7-- cells for tissue repair, and for the --8-- of disease.

Next page 

Theoretical Exam of Animal Biology: 3rd Year Biology (Microbiology Branch)
Exams for Academic Year 2016- 2017: 1st term

- 1) Bacterial conjugation includes the four stages, what are these stages? (8 D)**
- 2) Choose the right answer of the following: (22 D)**
- 1- Adaptations that affect how an organism acts are called----- adaptations:
A- Structural, B- Physiological, C- Behavioural, D- all are wrong.
 - 2- Any genetic change in a population that is inherited over several generations is called: A- cell theory, B- gene theory, C- evolution, D- homeostasis.
 - 3- A taxonomic group that can be known easily by knowing one of its individuals is called: A- Order, B- Family, C- Genus, D- Species.
 - 4 -Most prokaryotes reproduce through a process called:
A- binary fission, B- multiple fission, C- meiosis, D- mitosis.
 - 5- Since 1981, Protozoa is ranked as a:
A- Class, B- Phylum, C- Sub-kingdom, D- Kingdom.
 - 6- Organisms which move by using foot-like structures called pseudopodia are called:
A-Flagellates, B- Ciliates, C- Amoebae, D- Sporozoans.
 - 7- Conversion of a trophozoite of protozoa to a cyst form is known as:
A- Encystation, B- Excystation, C- Osmotrophy, D- Phagocytosis.
 - 8- The fundamental difference between multiciliate flagellates and ciliates is the presence of ---- in ciliates alone.
A- micronuclei, B- macronuclei, C- cilia, D- mitochondria.
 - 9- A process of multiple divisions along the ciliate cell body, producing a chain of new organisms is called:
A- Binary fission, B- Budding, C- Strobilation, D- Palintomy.
 - 10- Ciliate species range in size from as little as ---- to as much as 4 mm in length:
A-10 nm, B- 10 μ m, C- 4 μ m, D- 1 mm.
 - 11- To regulate osmotic pressure, most freshwater amoebae have a:
A- digestive vacuole, B- contractile vacuole, C- cytostome, D- cytoproct.
- 3) Put the correct word from the following list in the suitable blank: (20 D)**
kill, adsorption, lytic, entry, enzymes, injects, release, replication, viruses, assembly

There are a few basic steps that all infecting viruses follow, and these are called the --1-- cycle. These include:

1. A virus particle attaches to a host cell. This is called "--2--".
2. The particle --3-- its DNA or RNA into the host cell. This is called "--4--".
3. The invading DNA or RNA takes over the cell and recruits the host cell's --5-- to make new virus particles. This is called "--6--".
4. The particles of the virus created by the cell come together to form new --7--.
This is called "--8--"
5. The newly formed viruses --9-- the cell so that they may break free and search for a new host cell. This is called "--10--".

مكتبة فينيقيا



كلية العلوم

الطبعة الثالثة

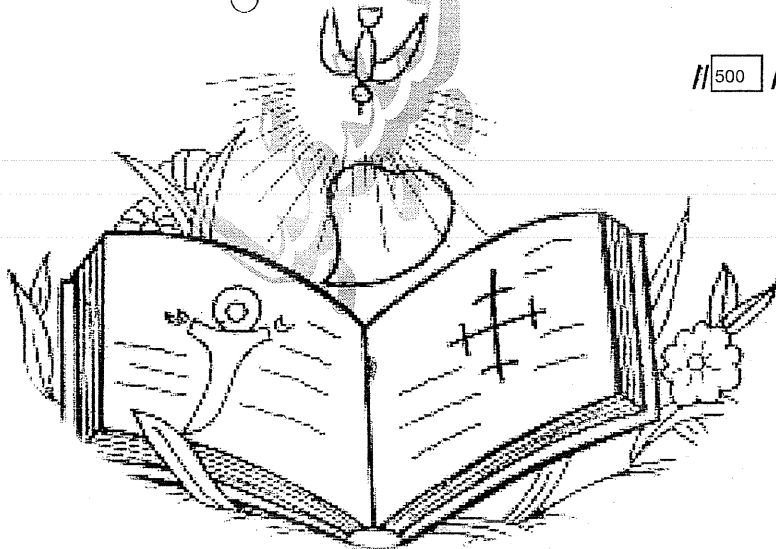


PHOENIX .

علم الأحياء \ حيوية كيميائية \

أسئلة دورات محلولة
بيولوجيا حيوانية انكليزي

السعر // 500 //



مكتبة فينيقيا

مدخل اسبيرو - مقابل سور الجامعة - هـ 0932374040/555930

Tishreen University
Faculty of Sciences
Department of Zoology

Name: _____
Mark: 100
Time: 2 hours

Exam of Animal Biology: 3rd Year Biology (Chem+Eco-biology Branches)
Exams for Academic Year 2018- 2019: 1st term

1) What are the six characteristics of life? Explain any one of them? (10 D)

2) Choose the most accurate answer of the following: (12 D)

- 1- The ability to maintain a constant internal environment in response to environmental changes is called:
A- Homeostasis, B- Evolution, C- Thermodynamics, D- Adaptation.
- 2- The type of adaptations in which desert foxes have large ears for heat radiation and Arctic foxes have small ears to retain body heat is called----- adaptation:
A- Structural, B- Physiological, C- Behavioural, D- None of these.
- 3- A network of fibers throughout the cytoplasm that gives the cell its support and helps to maintain its shape is called:
A- Cell membrane, B- Centriole, C- Microtubule, D- Cytoskeleton.
- 4- The outer segment of Photoreceptor cell is now known to be a highly modified kind of primary: A- cilium, B- flagellum, C- neuron, D- membrane.
- 5- The stripes in skeletal muscle cells are caused by the regular arrangement of actin and ---- proteins: A- nucleic, B- myosin, C- epithelial, D- active.
- 6- Cancer cells lose the ability to undergo ---- or programmed cell death:
A- Signalling, B- apoptosis, C- angiogenesis, D- senescence.

3) Choose the wrong answer of the following: (12 D)

- 1- prokaryotic cell contains the following structures:
A-cell membrane, B- Cilia, C- Endoplasmic Reticulum, D- Chromosomes.
- 2- Eukaryotic animal cell contains the following structures:
A- Centrioles, B- Golgi Complex, C- Mitochondria, D- Cell wall.
- 3- Paramecium: A- moves by cilia, B- contains contractive vacuole,
C-lives in salt water, D- contains two nuclei.
- 4- Examples of organelles are the following except:
A- Mitochondrion, B- Protein, C- Golgi complex, D- Lysosome.
- 5- Senescent cells are known to play important physiological functions in:
A- sexual reproduction, B- tumour suppression,
C- wound healing, D- embryonic development.
- 6- Adipose cells have an endocrine function such as: A- producing hormones,
B- producing vitamins, C- insulin sensitivity, D- cell signalling,

4) Put the correct word from the following words in the suitable blank: (16 D)

generator, oxygen, aerobic, metabolic, nutrients, anaerobic, efficient, organelle.
Mitochondrion is a rod-shaped --1--that can be considered the power --2--of the cell, converting oxygen and --3-- into adenosine triphosphate. ATP is the chemical energy "currency" of the cell that powers the cell's --4-- activities. This process is called --5-- respiration and is the reason animals breathe --6--. Without mitochondria, higher animals would likely not exist because their cells would only be able to obtain energy from--7-- respiration, a process much less --8-- than aerobic respiration.

Next page

Exam of Animal Biology: 3rd Year Biology (Chem+Eco-biology Branches)
Exams for Academic Year 2017- 2018: 2nd term

- 1) What are the six characteristics of life? Explain any one of them? (10 D)
- 2) Choose the most accurate answer of the following: (12 D)
- The ability to maintain a constant internal environment in response to environmental changes is called:
A- Homeostasis, B- Evolution, C- Thermodynamics, D- Adaptation.
 - The type of adaptations in which desert foxes have large ears for heat radiation and Arctic foxes have small ears to retain body heat is called----- adaptation:
A- Structural, B- Physiological, C- Behavioural, D- None of these.
 - A network of fibers throughout the cytoplasm that gives the cell its support and helps to maintain its shape is called:
A- Cell membrane, B- Centriole, C- Microtubule, D- Cytoskeleton.
 - The outer segment of Photoreceptor cell is now known to be a highly modified kind of primary: A- cilium, B- flagellum, C- neuron, D- membrane.
 - The stripes in skeletal muscle cells are caused by the regular arrangement of actin and ---- proteins: A- nucleic, B- myosin, C- epithelial, D- active.
 - Cancer cells lose the ability to undergo ---- or programmed cell death:
A- Signalling, B- apoptosis, C- angiogenesis, D- senescence.
- 3) Choose the wrong answer of the following: (12 D)
- Examples of an organelles are the following except:
A- Protein, B- Golgi complex, C- Lysosome, D- Mitochondrion.
 - Plant cells are more similar in size and their shapes are typically:
A- rectangular, B- cube, C- spherical, D- both A and B.
 - Characteristics that define smooth muscle tissue cells are:
A- multinucleated, B- not striated, C- not branched, D- involuntarily controlled.
 - Adipose cells have an endocrine function such as: A- producing vitamins, B- producing hormones, C- insulin sensitivity, D- cell signalling,
 - Golgi apparatus is responsible for ---- certain cellular products:
A- manufacturing, B- shipping, C- storing, D- digesting
 - Cancer cell development can be caused by mutations that occur from factors such as: A- chemicals, B- biological ageing, C- ultraviolet light, D- viral infection.
- 4) Put the correct word from the following words in the suitable blank: (16 D)
- organized, hydrophobic, lipid, intracellular, membrane, bilayer, extracellular, hydrophilic.

The phospholipids of a cell --1-- are arranged in a double layer called the --2-- --3--.
The --4-- phosphate heads are always arranged so that they are near water. Watery fluids are found both inside a cell (--5-- fluid) and outside a cell (--6-- fluid). The --7-- tails of membrane phospholipids are --8-- in a manner that keeps them away from water.

Next page



assemblage of populations of different species.

• Vitamins: a mixed assortment of different compounds grouped together not because of chemical affinity between them but because they share the same functional attributes.

— الوالد الثامن : —

- Organic compounds: they form the structures of the body and regulate the chemical processes going on inside it.
- Insight: it enables the animal to solve the new problems mentally without the necessity of trial and error.

— انتهى حل الدورة —



* 5) A - sexual reproduction.

* 6) B - producing vitamins.

- السؤال الرابع:

1 - organelle ; 2 - generator ; 3 - nutrients ;

4 - metabolic ; 5 - aerobic ; 6 - oxygen ;

7 - anaerobic ; 8 - efficient.

* قسم د. كاترين منصور *

- السؤال الخامس:

* a) 1 - social behavior.

* b) 2 - di.

* c) 1 - + 0.

* d) 2 - imprinting.

* e) 3 - Steroid.

* f) 2 - habitat.

- السؤال السادس:

Visual Land marks ; echolocation ; electric ;

Smell ; migration.

- السؤال السابع:

• Ethology : the study of animal behavior.

• Community : consists of all the organisms that inhabit a particular area, it is an



Reproduction is the biological process by which new individual organisms (offspring) are produced from their parents.

- 5 - Life can respond: ALL Living organisms respond to their environment. When someone accidentally strikes his toe, almost instantly, he withdraws in pain.
- 6 - Finally, Life can adapt: An adaptation refers to process by which an organism becoming adjusted to the demands placed on it by the environment.

السؤال الثاني:

- * 1) A - Homeostasis.
- * 2) A - Structural.
- * 3) D - Cytoskeleton.
- * 4) A - cilium.
- * 5) B - myosin.
- * 6) B - apoptosis.

السؤال الثالث:

- * 1) C - Endoplasmic Reticulum.
- * 2) D - cell wall.
- * 3) C - Lives in salt water.
- * 4) B - Protein.





حل دورة مقدر البيولوجيا الحيوانية باللغة الانكليزية
اطلاب السنة الثالثة علم الحياة (حيوية كيميائية + بيئية)
الدورة الفصلية الأولى 2018-2019

* قسم د. علي منصور *

السؤال الأول:

- 1- Life is ordered ; 2- Life can work ;
3- Life grows and develops ; 4- Life can respond ;
5- Life can reproduce ; 6- Life can adapt .

Explaining any one of those:

- 1- Life is ordered: organisms have an enormously complex organization, and the basic unit of all complex systems of life; is the cell.
- 2- Life can work: Living creatures can take in energy from the environment. This energy, in the form of food, is transformed to maintain metabolic processes and for survival.
- 3- Life grows and develops: This means living organisms not just getting larger in size, but also they have the ability to rebuild and repair themselves when they are injured.
- 4- Life can reproduce: Reproduction is a fundamental feature of all known life, and life can only come from living creatures.

5 - Choose the correct answer (30 degrees):

- a- Territory behavior is a :
1- social behavior 2- insight 3- community
- b- Sucrose carp is a :
1- mono 2- di 3- poly
- c- Commensalism is known as:
1- + 0 2- ++ 3- +-
- d- In this behavior, learning is closely interacts with innate behavior:
1- cognition 2- imprinting 3- play
- e- Cholesterol is :
1-carp 2-protein 3-steroid
- f- The physical place where the organism lives:
1-ecological niches 2-habitat 3-both of them

6-Mention only the different types of Orientation (5 degrees).

7- Identify the following terms (9degrees):

Ethology, Community, Vitamins.

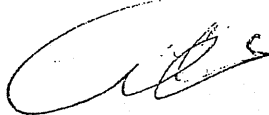
8- Mention the functions of Organic compounds and Insight (6 degrees).

23-1-2019

Our best wishes

Dr. Cathrine R. Mansour

Dr. Ali Mansour



5 - Choose the correct answer (30 degrees):

- a- It is an assemblage of populations of different species :
1- population 2- ecosystem 3- community
- b- Ethology is the study of animal :
1- biology 2- physiology 3- behavior
- c- Territory belongs to:
1-social behavior 2-learning 3-insight
- d- Parasitism is also known as:
1- ++ 2- + 0 3- + -
- e- Pytosterols are found in :
1-plants 2-animals 3-both of them
- f- On combustion carbs yield:
1-protein 2-fructose 3-energy

6-What are the differences between monosaccharides and disaccharides (5 degrees).

7- Identify the following terms (9degrees):
Ecology, communication, Metabolism.

8- Mention the functions of Cholesterol and Insight (6 degrees).

10-7-2018

Our best wishes

Dr. Cathrine R. Mansour

Dr. Ali Mansour





حل دورة مقرر البيولوجيا الحيوانية / انكليزي /
الطلاب السنة الثالثة علم الحياة / حيوية كيميائية + بيئية /
الدورة الفصلية الثانية ٢٠١٧ - ٢٠١٨

★ قسم د. علي منصور

الآثار الأولى:

- 1- Life is ordered. 2- Life can work.
- 3- Life grows and develops.
- 4- Life can respond. 5- Life can reproduce.
- 6- Life can adapt.

1- Life is ordered: Organisms have an enormously complex organization, and the basic unit of all complex systems of life, is the cell.

2- Life can work: Living creatures can take in energy from the environment. This energy, in the form of food, is transformed to maintain metabolic processes and for survival.

3- Life grows and develops: This means living organisms not just getting larger in size, but also they have the ability to rebuild and repair themselves when they are injured.

4- Life can reproduce: Reproduction is a fundamental feature of all known life, and life can only come from living creatures.

Reproduction is the biological process.

①

الزراعة - اسبيرو - مدخل كلية التمريض - مقابل سور الجامعة، الشارع الثاني

هـ ٥٥٥٩٣٠ - ٤٠٤٠٦٧٢٣٢٩

مكتبة فينقيا



by which new individual organisms (offspring) are produced from their parents.

5- Life can respond: All living organisms respond to their environment. When someone accidentally strikes his toe, almost instantly, he withdraws in pain.

6- Finally, life can adapt: An adaptation refers to process by which an organism becoming adjusted to the demands placed on it by the environment.

- السؤال الثاني -

- 1) A- Homeostasis.
- 2) A- Structural.
- 3) D- Cytoskeleton.
- 4) A- cilium.
- 5) B- myosin.
- 6) B- apoptosis.

- السؤال الثالث -

- 1) A- protein.
- 2) C- spherical.
- 3) A- multinucleated.
- 4) A- producing vitamins.
- 5) D- digesting.
- 6) B- biological ageing.



السؤال الرابع:

- | | |
|-----------------|-------------------|
| 1- membrane. | 5- intracellular. |
| 2- lipid. | 6- extracellular. |
| 3- bilayer. | 7- hydrophobic. |
| 4- hydrophilic. | 8- organized. |

★ كاترين منصور:

السؤال الخامس:

- a) 3- community.
- b) 3- behavior.
- c) 1- social behavior.
- d) 3- + -
- e) 1- plants.
- f) 3- energy.

السؤال السادس:

- Mono carbs are simple carb (glucose fructose),
die carbs are double sugar containing two
mono carbs joined together (Lactose, sucrose).

السؤال السابع:

- Ecology: is the scientific study of the interactions between organisms and their environments.



- Communication: is the intentional transmission of information between different individuals.
- Metabolism: is the chemical reactions that take place in cell.

الؤال الثامنة :

* cholesterol: cell membrane, the precursor from which most other steroids are synthesized.

* Insight: it enables the animal to solve the new problems mentally without the necessity of trial and error.

انتهى حل الدورة

بيولوجيا انگليزي (كيمياء + بيئية)

Tishreen University
Faculty of Sciences
Department of Zoology

Name:
Mark: 100
Time: 2 hours

Exam of Animal Biology: 3rd Year Biology (Chem+Eco-biology Branches)
Exams for Academic Year 2017- 2018: 1st term

- 1) What are different functions of proteins embedded in the cell membrane? (10 D)
- 2) Choose the most accurate answer of the following: (12 D)
 - 1- The ability to maintain a constant internal environment in response to environmental changes is called:
A- Homeostasis, B- Evolution, C- Thermodynamics, D- Adaptation.
 - 2- The type of adaptations in which desert foxes have large ears for heat radiation and Arctic foxes have small ears to retain body heat is called----- adaptation:
A- Structural, B- Physiological, C- Behavioural, D- None of these.
 - 3- A network of fibers throughout the cytoplasm that gives the cell its support and helps to maintain its shape is called:
A- Cell membrane, B- Centriole, C- Microtubule, D- Cytoskeleton.
 - 4- The outer segment of Photoreceptor cell is now known to be a highly modified kind of primary: A- cilium, B- flagellum, C- neuron, D- membrane.
 - 5- The stripes in skeletal muscle cells are caused by the regular arrangement of actin and ---- proteins: A- nucleic, B- myosin, C- epithelial, D- active.
 - 6- Cancer cells lose the ability to undergo ---- or programmed cell death:
A- Signalling, B- apoptosis, C- angiogenesis, D- senescence.
- 3) Choose the wrong answer of the following: (12 D)
 - 1- Examples of an organelles are the following except:
A- Mitochondrion, B- Golgi complex, C- Lysosome, D- Protein.
 - 2- Plant cells are more similar in size and their shapes are typically:
A- rectangular, B- cube, C- both A and B, D- none of these.
 - 3- Four characteristics define smooth muscle tissue cells. They are:
A- involuntarily controlled, B- not striated, C- not branched, D- multinucleated.
 - 4- Adipose cells have an endocrine function such as: A- producing hormones, B- producing vitamins, C- insulin sensitivity, D- cell signalling.
 - 5- Golgi apparatus is responsible for ---- certain cellular products:
A- manufacturing, B- digesting, C- storing, D- shipping.
 - 6- Cancer cell development can be caused by mutations that occur from factors such as: A- chemicals, B- ultraviolet light, C- biological ageing, D- viral infection.
- 4) Put the correct word from the following words in the suitable blank: (16 D)
anaerobic, exist, oxygen, mitochondrion, currency, generator, ATP, aerobic

--1-- is a rod-shaped organelle that can be considered the power --2-- of the cell, converting --3-- and nutrients into --4-- which is the chemical energy "--5--" of the cell that powers the cell's metabolic activities. Without mitochondria, higher animals would likely not --6-- because their cells would only be able to obtain energy from --7-- respiration, a process much less efficient than --8-- respiration.

Next page

5 - Choose the correct answer (30 degrees):

- a- The associative learning is called also:
1- cognition 2- conditioning 3- trial-error learning
- b- The quantities of vitamins that are required for metabolism are in very :
1- small amounts 2- large amounts 3- not required
- c- Animals that communicate by odor emit chemicals signals called:
1-smell 2-steroid 3-pheromone
- d- Parasitism is also known as:
1- + + 2- + 0 3- + -
- e- Community includes :
1-biotic factor 2-abiotic factor 3-both of them
- f- Which of these carbs are disaccharides:
1-lactose 2-fructose 3-both of them

6-What are the types of Orientation (5 degrees).

**7- Identify the following terms (9degrees):
Habitat, Ethology, Motivation.**

8- Mention the functions of Organic compounds and Agonistic behavior (6 degrees).

7-2-2018

Our best wishes

Dr. Cathrine R. Mansour

Dr. Ali Mansour



حل دورة مقرر البيولوجيا الجوانية باللغة الانكليزية -

اطلاب السنة الثالثة علم الحياة / بيئية + كيميائية /

الدورة الفصلية الأولى ٢٠١٧ - ٢٠١٨

★ قسم در علي منصور :

- السؤل الأول :

- a) Channel proteins - form small openings for molecules to diffuse through.
- b) Carrier proteins - binding site on protein surface that «grabs» certain molecules and pulls them into the cell. (gated channels).
- c) Receptor proteins - molecular triggers that set off cell responses (such as release of hormones or opening of channel proteins).
- d) Cell Recognition proteins - ID tags.. to identify cells to the body's immune system.
- e) Enzymatic proteins - carry out metabolic reactions.

- السؤل الثاني :

- 1) A - Homeostasis.
- 2) A - Structural.
- 3) D - Cytoskeleton.
- 4) A - cilium.
- 5) B - myosin.
- 6) B - apoptosis.



السؤال الثالث:

- 1) D. protein.
- 2) D. none of these.
- 3) D. multinucleated.
- 4) B. producing vitamins.
- 5) B. digesting.
- 6) C. biological ageing.

السؤال الرابع:

1. Mitochondrion.
2. generator.
3. oxygen.
4. ATP.
5. currency.
6. exist.
7. anacrobic.
8. aerobic.

★ قسم د. كاترين منصور:

السؤال الخامس:

- a) 2. conditioning.
- b) 1. small amounts.
- c) 3. pheromone.
- d) 3. + -
- e) 1. biotic factors.



f) 1 - Lactose.

القول السادس:

visual landmarks, echolocation,
electric, smell, migration.

القول السابع:

- * Habitat: is the physical place where the organism lives.
- * Ethology:
- * Motivation: is the internal state of an animal that is the immediate cause of its behavior.

القول الثامن:

- Organic Compounds: they form the structure of the body and regulate the chemical processes going on inside it.

- Agonistic Behavior: determines which competitor gains access to some resources.

انتهى حل الدورة

Exam of Animal Biology: 3rd Year Biology (Chem+Eco-biology Branches)
Exams for Academic Year 2016- 2017: 3rd term

- 1) What are different functions of proteins embedded in the cell membrane? (10 D)
2) Choose the most accurate answer of the following: (12 D)

- 1- The nuclear pores allow the passage of molecules of only about ---- wide.
A- 7 nm, B- 8 nm, C- 9 nm, D- 10 nm.
- 2- The fine study of different body tissues called:
A- Histology, B- Anatomy, C- Embryology, D- Microbiology.
- 3- Taking substances into the cell is called:
A- Exocytosis, B- Osmosis, C- Endocytosis, D- selective permeability.
- 4- Adaptations that affect how an organism acts are called ---- adaptations.
A- Structural, B- Physiological, C- Behavioural, D- None of these.
- 5- Cellular respiration has---- main stages: A- three, B- two, C- five, D- four.
- 6- The ----can act as a glue to attach cells together.
A - Phospholipids, B- Cholesterol, C- glycocalyx, D- Proteins.

- 3) Choose the wrong answer of the following: (12 D)

- 1- prokaryotic cell contains the following structures:
A-cell membrane, B- Cilia, C- Endoplasmic Reticulum, D- Chromosomes.
- 2- Eukaryotic animal cell contains the following structures:
A- Centrioles, B- Golgi Complex, C- Mitochondria, D- Cell wall.
- 3- Paramecium: A- moves by cilia, B- contains contractive vacuole,
C-lives in salt water, D- contains two nuclei.
- 4- Examples of organelles are the following except:
A- Mitochondrion, B- Protein, C- Golgi complex, D- Lysosome.
- 5- Senescent cells are known to play important physiological functions in:
A- sexual reproduction, B- tumour suppression,
C- wound healing, D- embryonic development.
- 6- Adipose cells have an endocrine function as: A- producing hormones,
B- producing vitamins, C- insulin sensitivity, D- cell signalling.

- 4) Put the correct word from the following words in the suitable blank: (16 D)

cilium, absorb, rods, segment, protrusion, neuron, detect, photoreceptor,

--1-- cells (rods and cones) are cells in the eye that --2-- light. They are actually very specialised forms of --3-- . They need to collect light as efficiently as possible, so they have a specialised --4-- from the cell that is full of the molecules that --5-- light. --6-- , which are especially good at detecting light, have a bigger protrusion. This protrusion (called also outer --7--) is now known to be a highly modified kind of primary--8-- , a recently discovered organelle.

Next page

5 - Choose the correct answer (30 degrees):

- a- Which kind of behavior is play:
1- social 2- learning 3- migration
- b- Which group has acute senses such as claws, fangs and poisons :
1- prey 2- predator 3- both
- c- which of these is a die carb:
1- fructose 2- lactose 3- cellulose
- d- It is a basic characteristics of living thing:
1- metabolism 2- energy 3- vitamins
- e- The ability to learn is almost :
1- inherited 2- acquired 3- both of them
- f- Communication is the intentional transmission of what:
1- chemicals 2- information 3- orders

6- What are the differences between competition and mutualism (5 degrees).

7- Identify the following terms (9 degrees):
Ecology, Ethology, Steroids.

8- Mention the functions of organic compounds and the absorbed radiation (6 degrees).

11- 9-2017

Our best wishes

Dr. Cathrine R. Mansour

Dr. Ali Mansour



حل دورة مقرر البيولوجيا الحيوانية / انكليزي
اطلاعي السنة الثالثة علم الحياة / حيوية بشرية + كيمائية
الدورة الإضافية 2016 - 2017

* قسم د. علي فنصور *

الذال الأول:

- a- channel proteins - form small openings for molecules to diffuse through.
- b- Carrier proteins - binding site on protein surface that "grabs" certain molecules and pulls them into the cell, (gated channels).
- c- Receptor proteins - molecular triggers that set off cell responses (such as release of hormones or opening of channel proteins).
- d- Cell Recognition proteins - ID tags, to identify cells to the body's immune system.
- e- Enzymatic proteins - carry out metabolic reactions.

الذال الثاني:

- *1) c - 9nm.
- *2) A - Histology.
- *3) C - Endocytosis.
- *4) C - Behavioural.
- *5) A - three.
- *6) C - glycocalyx.





الذوالثالث:

- * 1) C - Endoplasmic Reticulum.
- * 2) D - Cell wall.
- * 3) C - Lives in salt water.
- * 4) B - Protein.
- * 5) A - sexual reproduction.
- * 6) B - producing vitamins.

الذوالرابع:

- * 1) photoreceptor.
- * 2) detect.
- * 3) neuron.
- * 4) Protrusion.
- * 5) absorb.
- * 6) rods.
- * 7) segment.
- * 8) cilium.

* قسم د. كاترين منصور

الذوالخامس:

- * a) 2 - Learning.
- * b) 2 - predator.
- * c) 2 - Lactose.
- * d) 1 - metabolism.
- * e) 1 - inherited.
- * f) 2 - information.

الذوالسادس:

- competition: organisms compete for food, light, water. it exists between either the same or between different species

- Mutualism: both partners benefit from the





relationship ++

السؤال السابع:

- Ecology: The scientific study of the interaction between organism and their environments.
- Ethology: The study of animal behavior.
- Steroids: are a biologically important group of compounds which have certain properties in common with lipid. Like their insolubility in water and solubility in organic compounds.

السؤال الثامن:

- organic compounds: are immensely important in living things, they form the structures of the body and regulate the chemical processes going on inside it.
- Absorbed radiation: warms the atmosphere, which in turn warms the surface of the earth below it.

التحري حل الدورة



الزراعة - اسبيرو - مدخل كلية التمريض - مقابل سور الجامعة، الشارع الثاني

0932374040-555930 هـ

مكتبة فينيقيا

یو لو جا جو سٹیل جو کھانہ

Tishreen University
Faculty of Sciences
Department of Zoology

Name:
Mark: 100
Time: 2 hours

Exam of Animal Biology: 3rd Year Biology (Chem-biology Branch)
Exams for Academic Year 2016- 2017: 2nd term

- 1) What are important questions which animal biologists attempt to answer? (8 D)
- 2) Choose the most accurate answer of the following: (12 D)
 - 1- Living creatures can take in energy from the environment. This means life can:
A- adapt, B- reproduce, C- respond, D- work.
 - 2- The type of adaptations in which desert foxes have large ears for heat radiation and Arctic foxes have small ears to retain body heat is called----- adaptation:
A- Behavioural, B- Physiological, C- Structural, D- sexual.
 - 3- In eukaryotes, most cellular respiration reactions take place within the:
A- Golgi Complex, B- cytoplasm, C- cell membrane, D- mitochondria.
 - 4- Cancer cells lose the ability to undergo ---- or programmed cell death:
A- fertilization, B- apoptosis, C- angiogenesis, D- senescence.
 - 5- Blood cells that determine blood type and are also responsible for transporting oxygen to cells are: A- Red cells, B- lymphocytes, C- platelets, D- neutrophils.
 - 6- Taking substances into the cell is called:
A- Exocytosis, B- Endocytosis, C- Osmosis, D- selective permeability.
- 3) Choose the wrong answer of the following: (14 D)
 - 1- Paramecium: A- lives in salt water, B- moves by cilia,
C- contains contractile vacuole, D- contains two nuclei.
 - 2- Cell membrane is composed of different types of following molecules:
A- Cholesterol, B- Proteins, C- Potassium ions, D- Carbohydrates.
 - 3- Characteristics which define cardiac muscle tissue cells are:
A- single nucleated, B- involuntary controlled, C- not striated, D- branched.
 - 4- Scientists use a number of techniques to probe the mysteries of the animal cell such as: A- cell fractionation, B- organ transplantation,
C- optical microscope, D- electronic microscope.
 - 5- Golgi apparatus is responsible for --- certain cellular products:
A- shipping, B- storing, C- manufacturing, D- digesting.
 - 6- Senescent cells are known to play important physiological functions in:
A- sexual reproduction, B- tumour suppression,
C- wound healing, D- embryonic development.
 - 7- A single-celled eukaryotic microorganism is:
A- Paramecium, B- Euglena, C- Amoeba, D- Virus.
- 4) Put the correct word from the following words in the suitable blank: (16 D)
Organized, hydrophobic, lipid, intracellular, membrane, bilayer, extracellular, hydrophilic
The phospholipids of a cell --1-- are arranged in a double layer called the --2-- --3--.
The --4-- phosphate heads are always arranged so that they are near water. Watery fluids are found both inside a cell (--5-- fluid) and outside a cell (--6-- fluid). The --7-- tails of membrane phospholipids are --8-- in a manner that keeps them away from water.

Next page

5 - Choose the correct answer (30 degrees):

- a- Fructose is:
1- mono carb 2- die carb 3- poly carb
- b- What is the kind of relationship between human and intestinal bacteria:
1- adaptation 2- competition 3- mutualism
- c- Agonistic behavior and territory are:
1-rhythmic behavior 2-insight 3-social behavior
- d- complex molecules are called also:
1- monomers 2-simple molecules 3-polymers
- e- Biotic factors include :
1-animals 2-plants 3-both of them
- f- The physical place where the organisms live is known as:
1-ecological niches 2-habitat 3-home

6- Mention only three functions of water (5 degrees).

7- Identify the following terms (9 degrees):
Metabolism, Conditioning, Population.

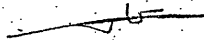
8- What are the functions of Cellulose and Communication (6 degrees).

15-6-2017

Our best wishes

Dr. Cathrine R. Mansour

Dr. Ali Mansour





حل دورة مقرر البيولوجيا الحيوانية / انكليزي /
لطلاب السنة الثالثة علم الحياة / حيوية كيميائية /
الدورة الفصلية الثانية 2016 - 2017

* قسم د. علي فنصور *

- السؤل الأول:

- 1- How do animals with complex body plans develop from a single cell?
- 2- why do many female animals exhibit mate choice?
- 3- adaptations help animals cope with life in hostile environments?
- 4- How do we best conserve rare and endangered animal species?

- السؤل الثاني:

- 1) D - work
- 2) C - Structural
- 3) D - mitochondria
- 4) B - apoptosis
- 5) A - Red cells
- 6) B - Endocytosis

- السؤل الثالث:

- 1) A - Lives in salt water



الزراعة - اسبيرو - مدخل كلية التمريض - مقابل سور الجامعة، الشارع الثاني

هـ 0932374040-555930

مكتبة فينيقيا



- 2) C - potassium ions.
- 3) A - single nucleated.
- 4) B - organ transplantation.
- 5) D - digesting.
- 6) A - sexual reproduction.
- 7) D - Virus.

- السؤال الرابع :

- 1 - membrane , 2 - lipid , 3 - bilayer ,
- 4 - hydrophilic , 5 - intracellular ,
- 6 - extracellular , 7 - hydrophobic ,
- 8 - organized .

* قسم د. كاترين منصور *

- السؤال الخامس :

- a) 1 - mono carb.
- b) 3 - mutualism.
- c) 3 - social behavior.
- d) 3 - polymers.
- e) 3 - both of them.
- f) 2 - habitat .

- السؤال السادس :

3 functions of water.





الؤال السابع:

- Metabolism: chemical reactions take place in cells.
- conditioning: associate one stimulus with another, it is called associative Learning.
- Population: a group of individuals in a particular geographic area, belong to same species.

الؤال الثامن:

- Cellulose: supporting material.
- Communication: the intentional transmission of information between different individuals.

انتهى حل الدورة -

Exam of Animal Biology: 3rd Year Biology (Chem-biology Branch)
Exams for Academic Year 2016- 2017: 1st term

- 1) What are different functions of proteins embedded in the cell membrane? (10 D)
- 2) Choose the most accurate answer of the following: (12 D)
 - 1- The study of internal structures such as forms of brain and heart is called:
A- Histology, B- Anatomy, C- Embryology, D- Microbiology.
 - 2- On average, eukaryotic cells are about ---- larger in diameter than prokaryotic cells: A- 5 times, B- 10 times, C- 20 times, D- 100 times.
 - 3- The type of adaptations in which desert foxes have large ears for heat radiation and Arctic foxes have small ears to retain body heat is called----- adaptation:
A- Physiological, B- Structural, C- Behavioural, D- None of these.
 - 4- The stripes in skeletal muscle cells are caused by the regular arrangement of actin and ---- proteins: A- nucleic, B- myosin, C- epithelial, D- active.
 - 5- Notably, protozoans locomote, but it is only via ---- means, in effect, using cilia, flagella, and pseudopodia.
A- Nonmuscular, B- muscular, C- vesicular, D- molecular.
 - 6- The ability to maintain a constant internal environment in response to environmental changes is called:
A- Homeostasis, B- Evolution, C- Thermodynamics, D- Adaptation.
- 3) Choose the wrong answer of the following: (12 D)
 - 1- Plant cells are more similar in size and their shapes are typically:
A- rectangular, B- cube, C- both A and B, D- none of these.
 - 2- Four characteristics define cardiac muscle tissue cells. they are:
A- involuntary controlled, B- not striated, C- branched, D- single nucleated.
 - 3- Scientists use a number of techniques to probe the mysteries of the animal cell such as: A- optical microscope, B- electronic microscope, C- cell fractionation, D- organ transplantation.
 - 4- Golgi apparatus is responsible for ---- certain cellular products:
A- manufacturing, B- digesting, C- storing, D- shipping.
 - 5- Senescent cells are known to play important physiological functions in:
A- tumour suppression, B- wound healing, C- sexual reproduction, D- embryonic development.
 - 6- Examples of an organelles are the following except:
A- Mitochondrion, B- Protein, C- Golgi complex, D- Lysosome.
- 4) Put the correct word from the following words in the suitable blank; (16 D)
specialized, replicate, treatment, unspecialized, tissue, replenish, renewal, generate.
Stem cells are unique cells of the body in that they are --1-- and have the ability to develop into --2-- cells for specific organs or to develop into tissues. They are able to divide and --3-- many times in order to --4-- and repair --5--. In the field of stem cell research, scientists are attempting to take advantage of the --6-- properties of stem cells by utilizing them to --7-- cells for tissue repair, and for the --8-- of disease.

Next page

6 - Choose the correct answer (24 degrees):

- a- Organic compounds owe their complexity to:
1- C atom 2- O atom 3- both of them
- b- Which yield more energy on combustion:
1- lipids 2- carbs 3- proteins
- c- The learning to ignore unimportant stimuli in life, is called:
1-learning 2-insight 3-habituation
- d- Social behavior is found between members of:
1- different spp. 2-same spp. 3-both of them
- e- The migration of animals is :
1-regular 2-ir-regular 3-random
- f- The physical place where the organisms live is known as:
1-ecological niches 2-habitat 3-home

7- Why different vitamins are grouped together (6 degrees).

8- Identify the following terms (12 degrees):
Biochemistry, Ecology, Cognition.

9- Mention the functions of organic compounds and Orientation (8 degrees).

26-1-2017

Our best wishes

Dr. Cathrine R. Mansour

Dr. Ali Mansour



حل دورة مقرر السولاجيا الحيوانية / انكليزي /
اطلاب السنة الثالثة علم الحياة / حيوية كيمياء /
الدورة الفصلية الأولى 2016 - 2017

* قسم د. علي منصور *

الذال الأول:

a. Channel proteins - form small openings for molecules to diffuse through.

b. Carrier Proteins - binding site on protein surface that "grabs" certain molecules and pulls them into the cell, (gated channels).

c. Receptor proteins - molecular triggers that set off cell responses (such as release of hormones or opening of channel proteins).

d. Cell Recognition Proteins - ID tags, to identify cells to the body's immune system.

e. Enzymatic proteins - carry out metabolic reactions.

الذال الثاني:

*1) B - Anatomy.

*4) B - myosin.

*2) B - 10 times.

*5) A - Nonmuscular.

*3) B - Structural.

*6) A - Homeostasis.

الذال الثالث:





- *1) D_ none of these.
- *2) B_ not striated.
- *3) D_ organ transplantation.
- *4) B_ digesting.
- *5) C_ sexual reproduction.
- *6) B_ Protein.

الـؤال الرابع:

- *1) unspecialized.
- *2) Specialized.
- *3) replicate.
- *4) replenish.
- *5) tissue.
- *6) renewal.
- *7) generate.
- *8) treatment.

* قـم دـ كـا تـرـيـن مـنـصـور *

الـؤال الخامس:

- *a) 1_ C atom.
- *b) 1_ Lipids.
- *c) 3_ habituation.
- *d) 2_ same spp.
- *e) 1_ regular.
- *f) 2_ habitat.

الـؤال السادس:

Because they share the same functional attribute.

الـؤال السابع:

• Biochemistry: the study of chemical compounds





found in Living things , and the reactions they take part.

• Ecology: the scientific study of the interactions between organisms and their environments.

• Cognition: the ability of an animal to be aware of and make judgments about its environment.

— اَلْقَوْلُ اَلثَّانِي :

— organic compounds:

• They form the structures of the body.

• Regulate the chemical processes going on inside it.

— Orientation: It enables animals to move towards desirable stimuli and away from harmful ones.

— اَلْاْتَمَرُ حُلُّ الدَّوْرَةِ —

Exam of Animal Biology: 3rd Year Biology (Chem-biology+ Eco-biology Branches)
Exams for Academic Year 2015- 2016: 3rd term

- 1) What are important questions which animal biologists attempt to answer? (10 D)
2) Choose the most accurate answer of the following: (10 D)

- 1- The nuclear pores allow the passage of molecules of only about ---- wide.
A- 7 nm, B- 8 nm, C- 9 nm, D- 10 nm.
- 2- The fine study of different body tissues is called:
A- Embryology, B- Anatomy, C- Histology, D- Microbiology.
- 3- Pushing substances out of the cell is called:
A- Osmosis, B- Endocytosis, C- Exocytosis, D- selective permeability.
- 4- The ----can act as a glue to attach cells together.
A- Phospholipids, B- Cholesterol, C- glycocalyx, D- Proteins.
- 5- Cellular respiration has---- main stages: A- two, B- five, C- three, D- four.

- 3) Choose the wrong answer of the following: (10 D)

- 1- A single-celled eukaryotic microorganism is:
A- Virus, B- Paramecium, C- Euglena, D- Amoeba
- 2- prokaryotic cell contains the following structures:
A- cell membrane, B- Endoplasmic Reticulum, C- Cilia, D- Chromosomes.
- 3- Paramecium: A- Moves by cilia, B- Contains contractive vacuole,
C- Lives in salt water, D- Contains two nuclei
- 4- Eukaryotic animal cell contains the following structures:
A- Centrioles, B- Golgi Complex, C- Mitochondria, D- Cell wall.
- 5- Cell membrane is composed of four different types of molecules:
A- Sodium ions, B- Cholesterol, C- Proteins, D- Carbohydrates.

- 4) Put correct the word from the following list in the suitable blank: (10 D)

Organelle, Nucleus, hereditary, ATP, eukaryotic, DNA, Nucleolus
The --1-- is a highly specialized double-membrane bound --2--that serves as the information and administrative centre of the--3--cell. This organelle has two major functions. It stores the cell's --4--material, or --5--, and it coordinates the cell's activities.

- 5) Match the phrases in list (A) with their complementary phrases in list (B). (10 D)

List (A)

- 1- Red blood cells determine blood type and are also
- 2- Endothelial cells form the inner lining
- 3- Stem cells are able to divide and replicate many times
- 4- Cancer cells lose sensitivity to anti-growth signals.
- 5- The flat, keratinized, dead cells are

List (B)

- A- continuously sloughed off and replaced with new cells from below
- B- in order to replenish and repair tissue.
- C- and lose the ability to undergo apoptosis or programmed cell death.
- D- of cardiovascular system.
- E- responsible for transporting oxygen to cells.

Next Page 2

6 - Choose the correct answer (24 degrees):

- a- In Pavlov experiment, the behavior is called:
1- play 2- conditioning 3- cognition
- b- Metabolism is a basic characteristic of all:
1- dead organisms 2- living organisms 3- both are wrong
- c- When the two partners are both benefit from the relation, it is called:
1- mutualism 2- commensalism 3- predation
- d- The motivational stimuli include:
1- light 2- temperature 3- both of them
- e- Fructose is :
1- die carb 2- mono carb 3- poly carb
- f- The physical place where the organisms live is known as:
1- ecological niches 2- habitat 3- home
- g- The size of territory is:
1- fixed 2- varying 3- constant
- h- Vitamins are synthesized by:
1- animals 2- plants 3- microorganisms

7- Mention only the three types of polysaccharides (6 degrees).

8- Identify the following terms (12 degrees):
Ecosystem, Phytosterols, Insight.

9- Mention only 4 functions of proteins (8 degrees).

5-9-2016

Our best wishes

Dr. Cathrine R. Mansour

Dr. Ali Mansour



حل دورة مقرر البيولوجيا الحيوانية / انكليزي /
لطلاب السنة الثالثة علم الحياة / حيوية بيئية + كيميائية /
الدورة الإضافية ٢٠١٥ - ٢٠١٦

* قسم د. علي منصور :

السؤال الأول :

- 1- How do animals with complex body plans develop from a single cell?
- Why do many female animals exhibit mate choice?
- What adaptations help animals cope with life in hostile environments?
- How do we best conserve rare and endangered animal species?

السؤال الثاني :

- 1) C - 9nm, 2) C - Histology, 3) C - Exocytosis,
- 4) C - glycocalyx, 5) C - Three.

السؤال الثالث :

- 1) A - Virus, 2) B - Endoplasmic Reticum,
- 3) C - Live in salt water, 4) D - Cell wall,
- 5) A - sodium ions.



4. - choose 2 questions of 3 افق خالي من اللابة

a- producers: autotrophic - synthesized organic food (plants).

- Consumers: animals - heterotrophic.

- Decomposers: detritivores (bacteria and fungi).

b- animals communicate by emit chemical signals, pheromons: is a chemical substance produced by one animal influences the behavior of another.

c- chromosomal differ between sexes. all but one of the pairs of them in males and females are the same. The pairs that differ called sex chromosomes in human. females are XX and males are XY. males determine the sex of the baby because they contain different type of gametes.

/END/



Animal biology

3ed year

second semister 2013

البيولوجيا الحيوانية

سنة ثالثة بسنة + كيميائية

فصل ثاني ٢٠١٣ - ٢٠١٤

1. put yes or No : مع Yes أو No

a - No , b - No , c - yes , d - No , e - yes

f - yes , g - No , h - yes , i - No , j - No

2. Missing word : الكلمة المفقودة

a - Inter breeding - Distinguished - differences

b - partners - Benefit

c - Ignore - stimuli

d - Innate

e - Numbre - structure

f - Proteins

3. Identify : عرف

● Ecological niche: The sum of all biotic and abiotic factors used in environment.

● Neuron: functional unit in the nervous system.

● Ethology: study of animal behavior.

● Motivation: the internal state of an animal that is immediate cause of its behavior.

● A deletion: when an end of chromosomes breaks off.

Answer the Following Questions:

1- Put Yes or No (30 degrees):

- a- Community consists of only organisms.
- b- Glands are specialized connective tissues.
- c- Mammalian skin are made up of lipids.
- d- Cognition and orientation are simple types of learning
- e- Migration is a type of orientation.
- f- For identifying organisms we use keys.
- g- Sulphur and phosphorus are sometimes found in carbs.
- h- Genes are located on chromosomes .
- i- The mutation rates of individual genes are very high.
- j- Starch is more soluble in water than glycogen.

2- Put in to the spaces with the suitable words (33 degrees):

- a- Varieties are capable on-----but can be-----by slight structural-----
- b- In mutualism both-----from the relationship.
- c- Habituation is a learning to-----unimportant----- in life .
- d- In imprinting, learning interacts closely with----- behavior.
- e- Chromosomes mutations include changes in chromosomes----- or-----.
- f- Enzymes are -----.

3- Identify the following terms (25 degrees):

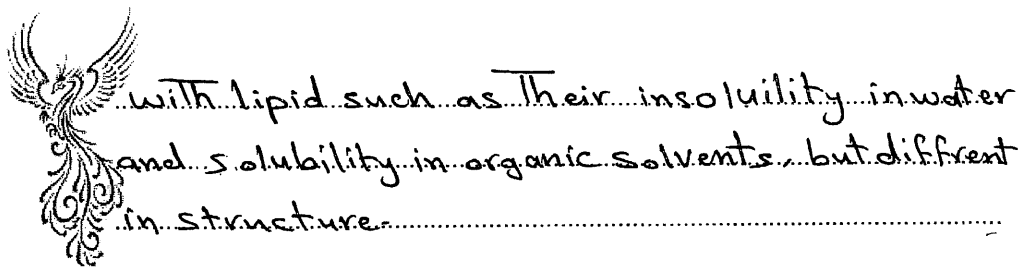
Ecological niche, Neuron, Ethology, Motivation, A deletion.

4- Choose only two questions and answer them (12 degrees):

- a- The nutritional groups of the ecosystem.
- b- Communication by chemicals.
- c- Chromosomes sex determination.

My best wishes

Dr. Cathrine R. Mansour
8-7-2013



9- choose two questions: افق سؤالين

● The Three types of muscles in vertebrates:

a - skeletal, voluntary movements.

b - Smooth, involuntary movements.

c - Cardiac, heart

- The mutation rates are low but each organism has many genes, and a population has many individuals. So, per individual and per population, mutations are common events, not rare.

- major type of connective tissues:

Loose - adipose - fibrous - cartilage - Bone -

Blood and lymph.

/end/



Animal biology

3rd year

البيولوجيا الحيوانية

سنة الثالثة بـ شـ و كـ مـ

الدورة الإضافية كـ مـ و كـ مـ

1- put yes or No. صح أو No

a- No b- No c- No d- No e- yes

f- No g- No h- No i- No j- No

2- Missing words - الكلمات المفقودة

a- parasitism, harms, host

b- mucus - membrane - releases - enzymes

c- Ethology

d- Internal

e- External - structure

3- Identifying تعريف

• Gene mutation: is an alternation in DNA sequence.

• Ecological nich: is the sum of all biotic and abiotic factors that the organism used it in its environment.

• Metabolism: chemical reaction that take place in cell.

• Territory: an area that an animal defends excluding other members of its own species.

• Steroids: are a biologically important group of compound which have certain properties in common

Answer the Following Questions:

1- Put Yes or No (30 degrees):

- a- Consumers are autotrophic animals.
- b- Epithelial tissues function to bind and support other tissues.
- c- Proteins and vitamins are called micronutrients.
- d- The chemical reactions in the cells occur in large steps.
- e- Learning behavior is acquired during the life-time of an individual.
- f- Insight is best developed in all animals.
- g- Migration is a competitive social behavior.
- h- Varieties can be distinguished by slight structural differences.
- i- In all animals, chromosomes differ between the two sexes.
- j- Some particular genes can mutate.

2- Put in to the spaces with the suitable words (33 degrees):

- a- In ----- : one organism, the parasite, ----- the -----.
- b- The ----- lining the small intestine ----- digestive -----.
- c- ----- is the study of animal behavior.
- d- Motivation is the ----- state of an animal.
- e- ----- permit quick identification of animals.

3- Identify the following terms (25 degrees):

Gene mutation, Ecological niche, Metabolism, Territory, Steroids.

4- Choose only two questions and answer them (12 degrees):

- a- The three types of muscle tissues in vertebrates.
- b- The mutations rates.
- c- The major types of connective tissue in vertebrates.

My best wishes

Dr. Cathrine R. Mansour
2-9-2013



4 - The characteristics are : External structures, cell structures and chemical constitution.

5 - مقارنة بين RNA و DNA

	RNA	DNA
Suger	Ribose	deoxy-ribose
No. base	Uracil	Thyamine
strain	single-strained	double-strained

6 - Roles of water.

'The end'



Animal biology البيولوجيا الحيوانية

سنة ثالثة بيئة و أحيائية

① - Yes or No : أجب بـ Yes أو No

a: No , b- No , c- No , d- No

e: Yes , f: No , g- No , h- yes

② Missing words الكلمات المفقودة

a - Cytoplasm, b- emit signals- pheromons.

c- specific reactants or substrates

d- populations - species

e- evolutionary

f- endless

③ Identify words عرف الكلمات التالية

• Adaption: the accumulation of these different genetic variations that are favored by the environment

• Ethology: The study of animal behavior

• Deletion: when an end of a chromosome breaks off

• Carbs: compounds that contain only C, H, O

• Species: group of organisms that have numerous features common and do not normally breed with other species.

Answer the Following Questions:

1- Put Yes or No (24 degrees):

- a- Nucleotides occur in equal amounts in DNA.
- b- Competition exists only between the different species.
- c- Social behavior is a type of learning.
- d- Coenzymes are proteins.
- e- Viruses are obligate intracellular parasites.
- f- Cognition is called the associative learning.
- g- DNA is a simple molecule.
- h- Water is called the universal solvent.

2- Put in to the spaces with the suitable words (30 degrees):

- a- RNA is found in the nucleus as well as ~~in~~ the -----
- b- Animals that communicate by odors-----chemical-----called-----
- c- Most enzymes are highly-----with regards to the -----they affect.
- d- Community is an assembly of-----of different-----
- e- Orthodox taxonomy is called an----- classification.
- f- The number of protein is-----.

3- Identify the following terms (20 degrees):

Adaption, Ethology, Deletion, Carbs, Species.

4- Mention only the characteristics that are used in identification of different organisms (6 degrees).

5- What are the differences between RNA and DNA (12 degrees).

6- Mention only two roles of water (8 degrees).

My best wishes

Dr. Cathrine R. Mansour
29-1-2014



in its environment.

• Species: a group of organisms which have numerous features in common and do not breed with other species.

• Lactose: is a Disaccharides, double sugars, containing two monosaccharides joined together.

الـؤال الثالث: فاهي وظيفة مالي: 3-

• DNA repair mechanism: act as a major defense system against environmental and cellular damage to DNA.

• Pheromones: chemical substance produced by one animal influences the behavior of another.

• Carbs: Energy.

الـؤال الرابع: فاهي مراحل (مويات): 4-

علم البيئة، وتحدث عن واحد منها فقط؟

a- organism, b- Population,

c- community, d- Ecosystem.

*12/degrees about speaking of one of them.

انترجى حل الدورة





حل دورة فقرر البيولوجيا الحيوانية / انكليزي /
اطلا ب السنة الثالثة علم الحياة / بيئة + كيمياء /
الدورة الفصلية الثانية 2014 - 2015

* (قسم د. كاترين فنصور) *

— السؤال الأول: اختر الإجابة الصحيحة. 1) —

- * a) 1 - biotic factors.
- * b) 3 - nucleus and mitochondria.
- * c) 1 - insoluble carb.
- * d) 2 - cannot be inherited.
- * e) 3 - scientific names.
- * f) 2 - cholesterol.
- * g) 2 - rhythmic behavior.
- * h) 3 - all of them.
- * i) 3 - chemical constitution.
- * j) 2 - number or structure.

— السؤال الثاني: عرف مايلي. 2) —

- Migration: The regular movements of animals over a relatively long distances between two regions each year.
- Mutagens: Agents cause DNA damage.
- Ecological Niches: sum of all biotic and biotic factors that organism used

Tishreen University
Faculty of Science
Zoology Department

Animal Biology Determined Questions

الفصل الثاني /

Name :
Degree: 100
Time : 2 hours

Answer the Following Questions:

بيولوجيا حيوانية / انكليزي /
لنة الثالثة / بيئة + كيمياء /

1- Choose the correct answer (50 degrees):

a- Community consists of:

1-biotic factors 2-abiotic factors 3-both

b- DNA is found in:

1-nucleus 2-nucleolus 3-nucleus and mitochondria

c- Cellulose is a highly:

1-insoluble carb 2-soluble carb 3-dissolved carb

d- A learned behavior pattern :

1-can be inherited 2-cannot be inherited 3-did appear

e- In precise identification of organisms we used:

1-common names 2-usual names 3-scientific name

f- Sex hormones of vertebrates are produced from:

1-phytosterol 2-cholesterol 3-protein

g- Repeated behavior is known as:

1-usual behavior 2-rhythmic behavior 3-innate behavior

h- Amino acids of proteins may differ in their:

1-number 2-type and sequence 3-all of them

i- When identifying bacteria which all look alike we use:

1-cell structure 2-DNA 3-chemical constitution

j- Chromosome mutations include changes in:

1-number 2-number or structure 3-number and structure

2- Identify the following terms (25 degrees):

Migration, Mutagen, Ecological Niches, Species, Lactose.

3- What are the functions of (15 degrees):

DNA repair mechanism , Pheromones, Carbs.

4- What are the levels of Ecology, and speak about only one of them (10 degrees).

My best wishes

Dr. Cathrine R. Mansour

2-7-2015



environment.

c - universal solvent.

d - source of H & O.

e - transport substances.

f - Life originated in water.

g - Many organisms live in it.

h - absorbed Sun Light.

انتهى حل الدورة -



contact with the substrate when the two are joined in the Enzyme-Substrate complex.

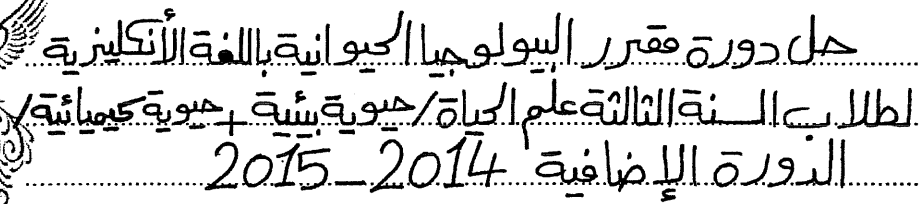
• Ecology: the scientific study of the interactions between organisms and their environment.

• Ethology: the study of animal behavior.

3- فاهي التغييرات في بنية الصبغيات؟ وتكلم عن واحدة منها.
a) an inversion. , b) a translocation.
c) a deletion. , d) a duplication.
"ويشارك التكلم عن إحداها الطالب".

4- تكلم عن تجربة بافلوف
exposed dogs to a sound (ringing bell) than sprayed powdered meat into their mouth, causing them to salivate. Eventually, dogs salivated in response to the sound alone, which they had learned to associate with the another stimulus (meat), it is called the associative Learning.

5- اذكر خمسة من وظائف الماء.
a- Living things are made largely of it.
b- internal component and main external



اختبر الإجابة الصحيحة: 1)

* 1- 3) cell structure.

- Active site: the small portion of on Enzyme molecule that can be in

مقرر البيولوجيا الحيوانية / انكليزي

Answer the Following Questions:

السنة الثالثة

1- Choose the correct answer (50 degrees):

a- The relation between human being and intestinal bacteria is called: **حيوية بيئية + حيوية كيميائية**

1-commensalism 2-mutualism 3- both are wrong

b- At the bottom of the hierarchy, the differences between taxa are:

1-more pronounced 2-less pronounced 3-much pronounced

c- Cholesterol is a highly:

1-carb 2-protein 3-steroid

d- Habituation is learning to ignore :

1-unimportant stimuli 2-important stimuli 3-good stimuli

e- The number of AA in a single protein may vary from:

1-5 to 5000 2-50 to 50000 3-50 to 50000 or more

f- Gene mutation is an alternation of:

1-DNA number 2-DNA sequence 3-mRNA number

g- Vertebrate pancreas contains large amount of:

1-RNA 2-DNA 3-lysosomes

h- The physical place where the organism lives is:

1-habitat 2-ecological niches 3-both are right

i- territory is:

1-social behavior 2-learning behavior 3-rhythmic behavior

j- in the classification of prokaryotes and eukaryotes, we use:

1-external structure 2-chemical composition 3-cell structure

2- Identify the following terms (25 degrees):

Genes, Communication, Active site, Ecology, Ethology.

3- What are the types of changes of chromosomes structure, and speak about one of them(10 degrees).

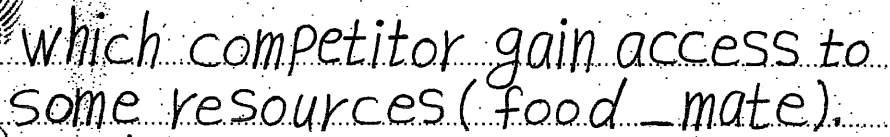
4- Speak about Pavlov experiment (5 degrees).

5- Mention five functions of water (10 degrees).

My best wishes

Dr. Cathrine R. Mansour

7-9-2015



b-steroid.

c-cell membrane.

انتهى حل الدورة -



*e) 3 - commensalism.

*f) 3 - play.

*g) 1 - structure.

*h) 1 - different spp.

الذوالتابع:

a - Visual Land marks.

b - Echolocation.

c - Electric.

d - Smell.

e - Migration.

الذوالتابع:

• Motivation: The internal state of an animal that is the immediate cause of its behavior.

• Sucrose: Are double sugars containing two monosaccharides joined together.

• Ethology: The study of animal behavior.

الذوالتابع:

• Organic compounds: Form the structures of the body and regulate the chemical processes in it.

• Agonistic behavior: Determines



*3) B - aerobic respiration.

*4) C - Live in salt water.

*5) A - Carbon Dioxide.

السؤال الرابع:

*1) Physiological.

*2) Suppression.

*3) healing.

*4) development.

*5) Pathological.

*6) Diseases.

السؤال الخامس:

*1) E.

*2) A.

*3) D.

*4) B.

*5) C.

* قسم دكتورين منصور *

السؤال السادس:

*a) 1 - functional attribute.

*b) 3 - both are right.

*c) 1 - niche.

*d) 2 - small.





حل دورة فقرر البيولوجيا الحيوانية / انكليزي
اطلا ب السنة الثالثة علم الحياة / حيوة بشة /
الدورة الفصلية الأولى 2015 - 2016

* قسم د. علي فنصور *

السؤال الأول:

- How do animals with complex body plans develop from a single cell?
- Why do many female animals exhibit mate choice?
- What adaptations help animals cope with life in hostile environments?
- How do we best conserve rare and endangered animal species?

السؤال الثاني:

- * 1) B - Anatomy.
- * 2) A - Exocytosis.
- * 3) B - Euglena.
- * 4) C - organelles.
- * 5) A - 9nm.

السؤال الثالث:

- * 1) B - centrioles.
- * 2) A - cell wall.

6 - Choose the correct answer (24 degrees):

- a- Vitamins are grouped together because of their:
1- functional attribute 2- chemical affinity 3- chemical composition
- b- The amount of insight in primates differ from:
1- one situation to another 2- sp. to sp. 3- both are right
- c- Members of a population have a common:
1- niche 2- habitat 3- place
- d- The quantity of enzymes that are necessary to maintain a chemical system is:
1- large 2- small 3- medium
- e- What is the name of the relationship + 0:
1- predation 2- mutualism 3- commensalism
- f- Which behavior is learning:
1- migration 2- territory 3- play
- g- Steroids differ from lipids in their :
1- structure 2- insolubility in water 3- solubility in benzene
- h- Community is made of populations of:
1- different spp. 2- same sp. 3- same spp.

7- What are the types of orientation (5 degrees).

8- Identify the following terms (12 degrees):

Motivation, Sucrose, Ethology.

9- What are the function of the following terms (9 degrees).

Organic compounds, Agonistic behavior, Lipid.

11-2-2016

Our best wishes

Dr. Cathrine R. Mansour

Dr. Ali Mansour

Exam of Animal Biology: 3rd Year Biology (Ecological-biology Branch)
Exams for Academic Year-2015- 2016: 1st term

- 1) What are important questions which animal biologists attempt to answer? (8 D)
- 2) Choose the most accurate answer of the following (10 D):
- 1- The study of internal structures such as forms of brain and heart is called:
A- Histology, B- Anatomy, C- Embryology, D- Microbiology
 - 2- Pushing substances out of the cell is called:
A- Exocytosis, B- Endocytosis, C- Osmosis, D- Selective permeability
 - 3- A single-celled microorganism that feature both plant and animal characteristics is:
A- Paramecium, B- Euglena, C- Virus, D- Bacterium
 - 4- Cytosol is the part of the cytoplasm that does not contain:
A- Molecules, B- Salts, C- organelles, D- water
 - 5- The nuclear pores allow the passage of molecules of only about ---- wide:
A- 9 nm, B- 8 nm, C- 10 nm, D- 7 nm
- 3) Choose the wrong answer of the following (10 D):
- 1- Prokaryotic cell contains the following structures:
A- Cell membrane, B- Centrioles, C- Cilia, D- Chromosomes
 - 2- Eukaryotic animal cell contains the following structures:
A- Cell wall, B- Mitochondria, C- Flagella, D- Mitochondria
 - 3- The nucleus is responsible for: A- protein synthesis,
B- aerobic respiration, C- cell division, D- producing ribosomes
 - 4- Paramecium: A- Moves by cilia, B- contains contractive vacuole,
C- Live in salt water, D- contains two nuclei
 - 5- Cell membrane is composed of different types of molecules:
A- Carbon Dioxide, B- Cholesterol, C- Proteins, D- Carbohydrates
- 4) Put correct words from the following list in the suitable blanks (12 D):
diseases, physiological, pathological, suppression, healing, mortality, development.
Senescent cells are known to play important --1-- functions in tumour --2--; wound--3-- and possibly embryonic/placental --4-- and paradoxically play a --5--role in age-related--6--
- 5) Match between phrases in list (A) and list (B) to form correct sentences (10 D):

List (A)

- 1- When fat is being stored, fat cells
- 2- Stem cells are able to divide and replicate many
- 3- Some immune cells engulf bacteria and viruses
- 4- Cancer cells lose sensitivity to anti-growth signals, and lose the
- 5- Photoreceptor cells are actually

List (B)

- A- times in order to replenish and repair tissue
- B- ability to undergo apoptosis or programmed cell death
- C- very specialised forms of neuron
- D- so they need to change their shape to 'swallow' them
- E- swell and become round in shape
- F- help to clot blood and prevent excessive blood loss

Next page →



الذال السابع:

- biotic factors: made up of all organisms (Plants + animals) occupy the same area and their relationship.
- abiotic factors: such as temperature - water - light - wind - - -

الذال الثامن:

- Metabolism: chemical reaction that take place in cells.
- Habitat: The physical place where the organism lives.
- Communication: The intentional transmission of information between different individuals.

الذال التاسع:

- Dermis: storage prevents excessive heat loss.
- Insight: It enables animals to solve the new problems correctly mentally without the necessity of trial and error.

انتهى حل الدورة -



*4- Life can reproduce: Life can only come from other living creatures.

*5- Life can respond: When someone accidentally stubs his toe, almost instantly, he flinches back in pain. Life is characterized by this response to stimuli.

*6- Finally, Life can adapt and respond to the demands placed on it by the environment.

— السؤال الثاني :

*1) A- Three.

*2) C- 9nm.

*3) B- Morphology.

*4) A- Endocytosis.

*5) D- Bacterium.

*6) B- Glycocalyx.

— السؤال الثالث :

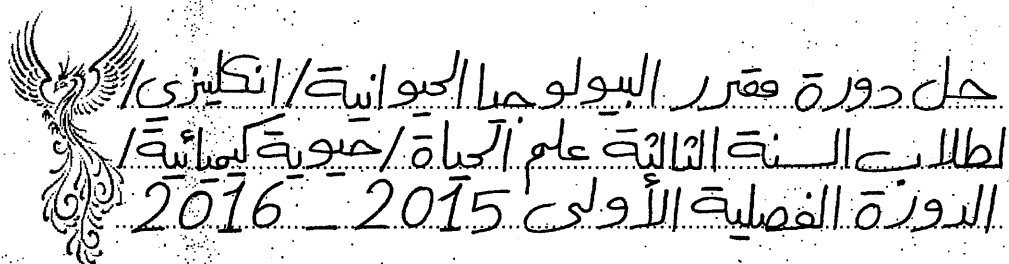
*1) D- cell wall.

*2) C- Live in salt water.

*3) A- Sodium ions.

*4) C- Peroxisomes.





* قسم د. عالی منصور *

الْقَوْلُ الْأَوَّلُ:

- 1- Life is ordered ;
- 2- Life can work ;
- 3- Life grows and develops ;
- 4- Life can respond ;
- 5- Life can reproduce ;
- 6- Life can adapt and respond .

Explaining any one of those:

- * 1 - Life is ordered: organisms have an enormously complex organization. We are all familiar with the intricate systems of the basic unit, the cell.
- * 2 - Life can also "work": Living creatures can take in energy from the environment. This energy in the form of food, is transformed to maintain metabolic processes and for survival.

*3- Life grows and develops: This means more than just getting larger in size. Living organisms also have the ability to rebuild and repair themselves when injured.

6 - Choose the correct answer (24 degrees):

e- Territory is fixed in its:

- 1- SP. 2- location 3- size

- When the relation is ++, it is called:

- 1- mutualism 2- community 3- predation

- The sizes of enzyme and its substrate molecules are:

- 1- the same 2- enzyme is less bigger 3- enzyme is much bigger

d- Which carb of the following is disaccharides:

- 1- lactose 2- fructose 3- glycogen

e- learned behavior is acquired during:

- 1- early stages 2- life-time 3- some stages

f- Parasites are divided into:

- 1- internal 2- external 3- both of them

g- Who is responsible for defense against foreign substances:

- 1- lipid 2- protein 3- DNA

h- Orientation behavior includes:

- 1- only smell 2- only migration 3- both

7 What are the differences of biotic and abiotic factors (6 degrees).

8 Identify the following terms (12 degrees):

Metabolism, Habitat, Communication.

9- What are the functions of the following terms (8 degrees).

Dermis, Insight.

3-2-2016

Our best wishes

r. Cathrine R. Mansour

Dr. Ali Mansour

Exam of Animal Biology: 3rd Year Biology (Chemical-biology Branch)
Exams for Academic Year 2015- 2016: 1st term

1) What are the six characteristics of life? Explain any one of them (10 Degrees).

2) Choose the most accurate answer of the following (12 Degrees):

- 1- Cellular respiration has---- main stages: A- three, B- two, C- five, D- four.
- 2- The nuclear pores allow the passage of molecules of only about ---- wide.
A- 7 nm, B- 8 nm, C- 9 nm, D- 10 nm.
- 3- The study of external features such as body parts is called:
A- Histology, B- Morphology, C- Embryology, D- Microbiology.
- 4- Taking substances into the cell is called:
A- Endocytosis, B- Exocytosis, C- Osmosis, D- selective permeability.
- 5- A unicellular prokaryotic microorganism that is neither plant nor animal, and it reproduces by scissiparity is called: A- Virus, B- Paramecium, C- Euglena, D- Bacterium.
- 6- The ---- can act as a glue to attach cells together.
A- Phospholipids, B- glycocalyx, C- Cholesterol, D- Proteins.

3) Choose the wrong answer of the following (8 Degrees):

- 1- Eukaryotic animal cell contains the following structures:
A- Centrioles, B- Golgi Complex, C- Mitochondria, D- Cell wall.
- 2- Paramecium: A- Moves by cilia, B- contains contractive vacuole,
C- lives in salt water, D- contains two nuclei.
- 3- Cell membrane is composed of different types of molecules:
A- Sodium ions, B- Cholesterol, C- Proteins, D- Carbohydrates.
- 4- Prokaryotic cell contains the following structures:
A- Ribosomes, B- cell membrane, C- Peroxisomes, D- Chromosomes.

4) Put the correct word from the following words in the suitable blank (10 Degrees):

Mortality, Suppression, Maturation, Deterioration, Senescence, Characteristic.
--1-- or biological ageing is the gradual --2-- of physiological --3-- of most complex life forms that on the level of the organism increases --4-- after --5--.

5) Match between phrases in list (A) and list (B) to form correct sentences (10 Degrees):

List (A)

- 1- Endothelial cells form the inner lining of
- 2- Photoreceptor cells are actually
- 3- Red blood cells determine blood
- 4- Stem cells are unique cells of the body in that they are
- 5- The flat, keratinized, dead cells are

List (B)

- A- unspecialized and have the ability to develop into specialized cells.
- B- cardiovascular system and lymphatic system structures.
- C- continuously sloughed off and replaced with new cells from below.
- D- responsible for angiogenesis or the creation of new blood vessels
- E- very specialised forms of neuron.
- F- type and are also responsible for transporting oxygen to cells.

---next page-->



الأسئلة الشائعة:

• Ecology: the scientific study of the interactions between organisms and their environment.

• Pheromone: is a chemical substance produced by one animal influences the behavior of another.

• Metabolism: the chemical reactions that take place in cells.

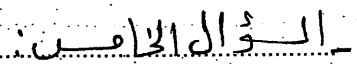
الأسئلة الشائعة:

• Microflora: synthesized vitamins in the gut.

• Vitamins: required for a variety of metabolic aims.

• Orientation: it enables animals to move towards desirable stimuli and away from harmful ones.

انتهى حل الدورة



- ☆ قسم دہکاترین منصور :

الزوال الناس

- a-storage.
- b-social behavior.
- c-proteins.
- d-parasitism.
- e-cholesterol.
- f-associative behavior.
- g-active site.
- h-both.

الحوال السابع:

سِرِّكَ لِلطَّالِبِ اجْتِبَارُ أَيِّ وَظِيفَتَيْنِ لِلْمَاءِ .



response to environmental changes.
Thermodynamics: energy is constant
and energy transformation is not
completely efficient.

السؤال الثاني:

- 1) C - 9nm.
- 2) A - Histology.
- 3) A - Exocytosis.
- 4) B - glycocalyx.
- 5) D - Three.

السؤال الثالث:

- 1) C - Endoplasmic Reticulum.
- 2) D - Cell wall.
- 3) C - Live in salt water.
- 4) A - Sodium ions.
- 5) A - Virus.

السؤال الرابع:

- 1 - ageing.
- 2 - deterioration.
- 3 - Senescent.
- 4 - suppression.
- 5 - healing.



حل دورة مقرر البيولوجية الحيوانية (الإنكليزي)

لطلاب السنة الثالثة علم الحياة / صوية بيئية + كيمائية /

الدورة الفصلية الثانية ٢٠١٥ - ٢٠١٦

★ قسم د. علي منصور :

- السؤل الأول :

1- The cell theory.

2- gene theory.

3- evolution.

4- homeostasis.

5- laws of thermodynamics.

- Explaining any one of those.

Cell Theory: all living organisms are composed of cells. The cell is the basic unit of life.

Gene Theory: traits are inherited through gene transmission. Genes are located on chromosomes and consist of DNA.

Evolution: any genetic change in a population that is inherited over several generations. These changes may be small or large, noticeable or not so noticeable.

Homeostasis: ability to maintain a constant internal environment in

6 - Choose the correct answer (24 degrees):

a- The main function of lipid is:

1- movement

2- storage

3- motion

b- Territory is a:

1- learning behavior

2- social behavior

3- motivation

c- Which organic materials are signaling from one part to another of the body :

1- proteins

2- carbs

3- DNA

d- What do we called the relationship + :

1- commensalism

2- parasitism

3- competition

e- Steroids are synthesized from:

1- phospholipid

2- cholesterol

3- protein

f- When one stimulus is associated with another , it is:

1- associative behavior

2- territory

3- play

g- The small portion of enzyme in the enzyme-substrate complex is known as:

1- active site

2- surface

3- bottom

h- Environmental factors are divided into:

1- biotic

2- abiotic

3- both

7- Mention two roles of water (2 degrees).

8- Identify the following terms (12 degrees):

Ecology, Pheromone, Metabolism.

9- What are the function of the following terms (12 degrees):

Microflora, Vitamins, Orientation.

21-6-2016

Our best wishes

Dr. Cathrine R. Mansour

Dr. Ali Mansour

Exam of Animal Biology: 1st Year Biology (Chem-biology+ Eco-biology Branches)
Exams for Academic Year 2010-2011: 1st term

- 1) What are the five basic principles of biology? Explain any one of them (10 D):
2) Choose the most accurate answer of the following (10 D):

- 1- The nuclear pores allow the passage of molecules of only about ---- wide.
A- 1 nm, B- 10 nm, C- 100 nm, D- 1000 nm.
- 2- The fine study of different body tissues is called:
A- Histology, B- Anatomy, C- Embryology, D- Microbiology.
- 3- Pushing substances out of the cell is called:
A- Exocytosis, B- Endocytosis, C- Osmosis, D- selective permeability.
- 4- The ---- can act as a glue to attach cells together.
A- Phospholipids, B- glycocalyx, C- Cholesterol, D- Proteins.
- 5- Cellular respiration has ---- main stages: A- two, B- five, C- four, D- three.

- 3) Choose the wrong answer of the following (10 D):

- 1- prokaryotic cell contains the following structures:
A- cell membrane, B- Cilia, C- Endoplasmic Reticulum, D- Chromosomes.
- 2- Eukaryotic animal cell contains the following structures:
A- Centrioles, B- Golgi Complex, C- Mitochondria, D- Cell wall.
- 3- Paramecium: A- Moves by cilia, B- contains contractile vacuole,
C- Lives in salt water, D- contains two nuclei.
- 4- Cell membrane is composed of four different types of molecules:
A- Sodium ions, B- Cholesterol, C- Proteins, D- Carbohydrates.
- 5- A single-celled eukaryotic microorganism is:
A- Virus, B- Paramecium, C- Euglena, D- Amoeba.

- 4) Put correct words from the following list in the suitable blanks (10 D):

deterioration, senescent, ageing, development, suppression, healing.

Senescence or biological -- is the gradual -- of functional characteristic of most complex life forms. -- cells are known to play important physiological functions in tumour --, wound --.

- 5) Match five of the phrases in list (A) with its complementary phrase in list (B) (10 D):

List (A)

- 1- Red blood cells determine blood type
- 2- Photoreceptor cells are actually
- 3- Stem cells are able to divide and replicate many times
- 4- Cancer cells lose sensitivity to anti-growth signals,
- 5- The flat, keratinized, dead cells are
- 6- Endothelial cells form the inner lining of cardiovascular system

List (B)

- A- continuously sloughed off and replaced with new cells from below
- B- in order to replenish and repair tissue.
- C- and lose the ability to undergo apoptosis or programmed cell death.
- D- very specialised forms of neuron
- E- and are also responsible for transporting oxygen to cells.



- Ecosystem: includes all abiotic factors in addition to the community of species that are found in a certain area, (biotic and abiotic factors).
- phytosterols: are the cholesterol or steroids that found in plants.
- Insight: the ability to respond correctly the first time to a situation different from any previous experiment.

السؤال التاسع:

Function of protein...

(٤ وظائف فقط للبروتينات شارك اختيارها للطلاب)

انتهى حل الدورة -



- السؤال الرابع :

- 1- Nucleus, 2- organelle, 3- eukaryotic
- 4- hereditary, 5- DNA.

- السؤال الخامس :

- 1) E- responsible for transporting oxygen to cells.
- 2) D- of cardiovascular system.
- 3) B- in order to replenish and repair tissue.
- 4) C- and lose the ability to undergo apoptosis or programmed cell death.
- 5) A- continuously sloughed off and replaced with new cells from below.

* قسم د. كاترين منصور :

- السؤال السادس : الإجابة الصحيحة :

- a) 2- conditioning, b) 2- living organisms,
- c) 1- mutualism, d) 3- both of them,
- e) 2- mono carb, f) 2- habitat,
- g) 2- varying, h) 2- plants.

- السؤال السابع :

starch, glycogen, cellulose.

- السؤال الثامن : التعاريف :

2