



Part I: Cytology

I- Choose the correct answer and write its letter in the answers table below:

(5 marks)

1- The ribosomes are formed in:

- A. nucleolus
 B. nucleus
 C. cytoplasm
 D. endoplasm

2- The proteins that stay in the cytosol are made by:

- A. bound ribosomes
 B. free ribosomes
 C. RER
 D. SER

3- The membrane of mitochondria form folds which are called cristae:

- A. inner
 B. outer
 C. ATP
 D. intermediate

4- The tails of phospholipid molecules are known as:

- A. hydrophilic
 B. lipophilic
 C. hydrophobic
 D. lipophobic

5- Both glycolipids and glycoproteins together form what is called:

- A. cell membrane
 B. cell coat
 C. phospholipid bilayer
 D. mitochondrial membrane

6- The molecules make the cell membrane less permeable and decrease flexibility.

- A. cholesterol
 B. carbohydrate
 C. lipid
 D. glycoproteins

7- In the liver, are responsible for neutralizing toxins.

- A. RER
 B. SER
 C. Golgi bodies I
 D. lysosomes

8- Lysosomes contain to breakdown waste materials.

- A. glycoproteins
 B. ATP energy
 C. digestive enzymes
 D. all of them

9- is the movement of molecules against their concentration gradient.

- A. passive transport
 B. active transport
 C. simple diffusion
 D. facilitated diffusion

10- Golgi receives newly made proteins and lipids from

- A. microtubules
 B. cytosol
 C. ER
 D. mitochondria

Question	1	2	3	4	5	6	7	8	9	10
Answer										

II- Fill in the space:

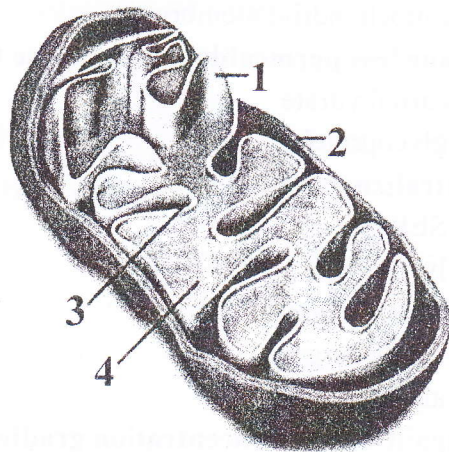
(5 marks)

- 1- The microfilaments are made of protein.
- 2- The DNA in prokaryotic cells is
- 3- Before cell division, the centrioles Themselves.
- 4- On the outside of the cell membrane, attached to some proteins and lipid.
- 5- The membranous organelles participate in cellular metabolism.
- 6- The cell membrane is made u of mix of proteins and
- 7- The transport in which larger materials are enter or exit from the cells is called
- 8- The lipid give the cell membranes their
- 9- Glycoproteins make as on the cell membrane.
- 10- The nucleus is surrounded by two membranes, together known as

III- Write the label for the diagrams:

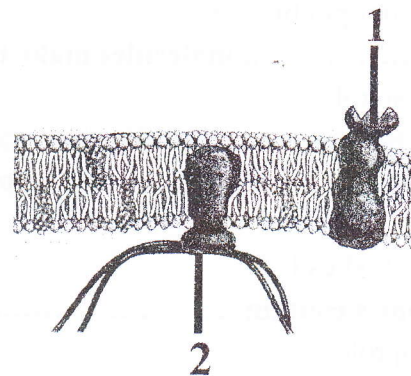
2.5 marks

A



- 1-
- 2-
- 3-
- 4-

B



- 1-
- 2-

Part II (12.5 marks)

I: Choose the best single correct answer (4 marks)

1- The structure of nervous tissues which support, protect neurons and don't transmit nerve impulse is.....

- a) Neurons b) Neuroglia c) Axon d) Interneurons

2- Connective tissue cells include.....

- a) Plasma cells b-) mast cells c) muscle cells d) a and b

3-An epithelium that lines the blood vessel and plays a role in O₂ and CO₂ exchange.....

- a) Simple columnar b) Simple cuboidal c) Stratified squamous d) Simple squamous

4-..... is a connective tissue that has a solid and calcified matrix.

- a) cartilage b) bone c) muscle d) fiber

II- Complete the following sentences (3.5 marks)

1- Dense Regular Connective Tissue Formswhich attaches muscle to muscle or bone to muscle.

2- The cell membrane of the muscle fiber is known asand the cytoplasm known as.....

3-Type of neurons that transmit information between sensory and motor neurons within the CNS is.....

4-..... tissue is characterized by the abundance of interstitial material between the cells

5- Type of epithelial tissue lines urinary bladder known as.....

6- Type of cell which cartilage consist mainly of is

III-Answer the following: (3 marks)

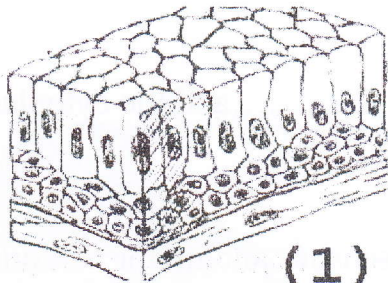
1-Write about simple cuboidal epithelial tissue concerning (description, location &function).

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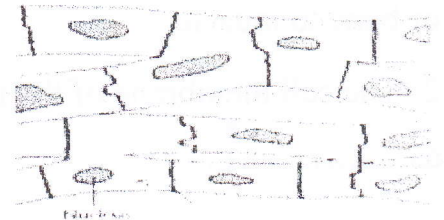
2- Classification of neurons according to function

V- Identify the following (1&2):

(2 marks)



(1)



(2)

Part III: Taxonomy

Answer the following questions: (12.5 marks)

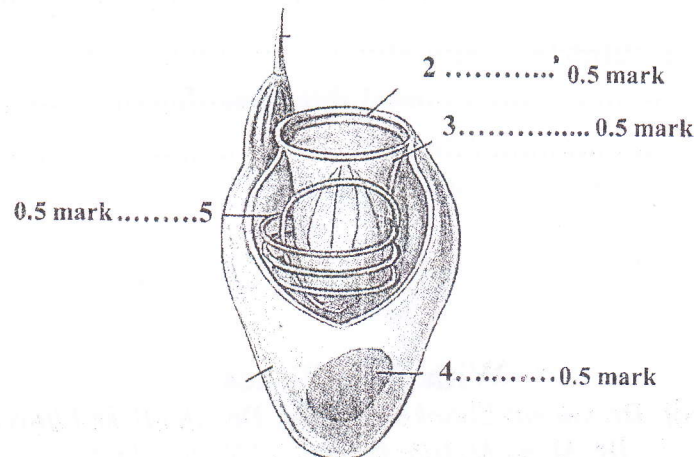
I: Choose the best single correct answer (5 marks)

1. *Musca domestica* is the scientific name of.....
 - a) House fly
 - b) Toad
 - c) Cockroach
 - d) Dog
2. Multinucleation is a characteristics of.....
 - a) Apicomplexa
 - b) Porifera
 - c) Ciliophora
 - d) Mastigophora
3. The coelom is present in
 - a) Human
 - b) Nematoda
 - c) Trematoda
 - d) Both a and b
4. Insects are grouped under
 - a) Protozoans
 - b) Invertebrates
 - c) Vertebrates
 - d) None of the above
5. In chordates, the long supporting rod that runs through the body is called the.....
 - a) Nerve cord
 - b) Notochord
 - c) Pharyngeal
 - d) Tail

II: Complete the following sentences (5 marks)

1. The body of the organism is not differentiated into cells in.....
2. A Kingdom of life in which organisms are unicellular.....
3. Nephridia are excretory units of phylum.....
4. Radial symmetry is a basic characteristic of phylum
5. The first invertebrates to develop jointed legs are.....

III: Identify the diagram (1), write the labels from 2 to 5 (2.5 marks)



(1)..... 0.5 mark

Part IV (12.5 marks)

I- Give the scientific expression of the following (5 marks, one for each)

- 1- Formation of female gametes ()
- 2- Rearrangement of the blastula to form a three-layered embryo with a primitive gut called the archenteron ()
- 3- Glands that discharge their secretions directly into the blood ()
- 4- A hormone that initiates uterine contraction during childbirth and milk release in mothers ()
- 5- A mixed gland which secretes insulin and glucagon ()

II- Complete the following sentences (5 marks, one for each)

- 6- is a hormone secreted from anterior pituitary lobe and stimulates milk production
- 7- Calcium Homeostasis is maintained by two hormones; parathyroid hormone (PTH) and
- 8- Adrenal cortex produces the steroid hormones cortisol and
- 9- gland produces melatonin which affects the modulation of sleep patterns
- 10- Hypothyroidism causing

III- Write briefly about types of animal eggs according to amount and distribution of yolk. (2.5 marks)

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With Best Wishes

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Time: two hours

Second term Final Exam of first term 2019/1020

Course title: healthy feeding. (URO13)

Q1- Answer by \sqrt or X for these sentences: (15 marks, $\frac{3}{4}$ mark each)

- 1-Ghrelin levels increase before meals and decrease after meals ()
- 2-The food pyramid contains the five main food groups that each person must not get them. ()
- 3-Leptin levels increase before meals and decrease after meals. ()
- 4-Pernicious anemia is inherited anemia and its symptoms are anorexia, loss of weight, dyspepsia, nausea, vomiting, diarrhea and the tongue become beefy. ()
- 5-Ghrelin Modulate inflammatory response ()
- 6-The lack of RBCs is the only cause of anemia. ()
- 7- Preservatives can not play a role in extending the shelf-life of numerous snacks ()
- 8- Hereditary Spherocytosis , Target cell anemia, megaloplastic anemia and Sickle cell anemia are examples of hemolytic anemia ()
- 9- The examples of preservative antioxidants used: such as natural antioxidants such as: vitamins C and E. and synthetic antioxidants butylated hydroxy toluene ()
- 10- Deficiency in dietary vitamin K may lead to Sterility in rats (production of immature gametocytes and abortion in pregnant females)..... ()
- 11- Vitamin E participates in epithelial glycoprotein synthesis and this protects the mucosa of urogenital tract, respiratory tract, gastrointestinal tract, the cornea and the skin. ()
- 12-Target cell anemia is Genetic disease and arise as a result of diminished or absent production of one or more globin chains. ... ()
- 13-The deficient of G6PDH in RBCs make the cell less able to produce enough NADPH necessary for regeneration of glutathione through pentose shunt pathway. ()
- 14-Vitamin k deficiency leads to Prolonged clotting time due to stimulating liver to secret clotting factors..... ()
- 15-The daily intake of iron is about 10 mg of which 1.5 mg is absorbed and the rest pass in the stools. ()
- 16- Anger sadness or boredom may not lead to Over-eating and obesity case ()

- 17-Vitamin D deficiency cause osteomalacia in adults softening of skeleton due to demineralization. ()
- 18-liver cirrhosis can cause megaloplastic anemia ()
- 19-Ghrelin hormone stimulate insulin secretion. ()
- 20- In some, pathological cases, the body increase the dependence on body fat to produce energy leading to increase the level of keto bodies causing ketonemia. ()

Q2- Answer Seven questions only: (35 marks: 5 marks each)

- 1-What are the physiological effects of ghrelin? 6 items
- 2-What are the biological functions of dietary lipids? 6 items
- 3-Briefly explain the types of dietary fibers? And mention the functions of dietary fibers in the intestine? 6 items
- 4- Mention the functions of hydrochloric acid (HCl) in stomach?
- 5-Compare between the types of flavoring agents?
- 6-Identify anemia? and what are the causes of iron deficiency anemia? 5 items
- 7-What are the causes or types of browning fruits and vegetables? and how can protect them by antibrowning agents?
- 8- What are the factors affecting basal metabolic rate in human body? 6 items.

With great success

Prof. Dr. Mohamed Bassam Al-Salahy Elbradei