

- Academic Year: 2nd semester 2015
-Course: Healthy Nutrition (UR013)
-Marks: 50
-Time: 2 hours
- Date: 4/6/2015



Q1: Choose the correct answer (10 marks):

1. A mineral essential for the production of thyroid hormones:
 - a)- Iron
 - b)- Iodine
 - c)- Selenium
 - d)- Zinc
2. Cells secrete HCl during digestion in the stomach:
 - a)- Neck cells
 - b)- G cells
 - c)- Chief cells
 - d)- Parietal cells
3. Extreme fluid retention observed in individuals suffering from:
 - a)- Anemia
 - b)- Kwashiorkor
 - c)- Marasmus
 - d)- both b & c
4. Body mass index range of obese people:
 - a)- 18.5–24.9
 - b)- 25–29.9
 - c)- ≥ 30
 - d)- 27–32
5. Butylated hydroxyanisole (BHA) is:
 - a)- Chelating agents
 - b)- Oxygen scavengers
 - c)- Primary antioxidants
 - d)- none of them
6. Prevent ingredients from separating again:
 - a)- Stabilisers
 - b)- Emulsifiers
 - c)- Anti-caking agents
 - d)- Anti-foaming agents
7. Converts amino acids to carbohydrates:
 - a)- Epinephrine
 - b)- Serotonin
 - c)- Melatonin
 - d)- Cortisol
8. Vitamin has vital roles in vision and immune defenses:
 - a)- Vitamin E
 - b)- Vitamin A
 - c)- Vitamin K
 - d)- Vitamin C
9. Inhibit the feeding centers in the brain:
 - a)- Catecholamines
 - b)- Orlistat
 - c)- Amphetamines
 - d)- none of them
10. Feeling of fullness that causes us to stop eating:
 - a)- Appetite
 - b)- Hunger
 - c)- Satiation
 - d)- none of them

Q2: Calculate (5 marks):

Body Mass Index (BMI) for a person, who has 85 Kg weight and 160 cm height.
Mention the category to its BMI.

See next

(2)

Q3: Write whether of the following statements is True (T) or Falls (F) and correct it (10 Marks):

1. Insulin is secreted from α - cells in pancreas ().
2. Vitamins E deficiency causes xerophthalmia and xerostomia ().
3. White adipose tissue contains more mitochondria and rich in blood ().
4. Enzymes are functional proteins ().
5. Bi-layer of cell membrane composed of steroids ().
6. Cells fail to use insulin properly in type 1 diabetes ().
7. Secretin stimulates the secretion of bicarbonate in the pancreas ().
8. E-Number of preservatives begins with number 3 ().
9. Anabolism Includes synthesis and energy storage reactions ().
10. Dopamine is responsible for involuntary movements ().

Q4: Mention the difference between (10 marks):

- a. White and brown adipose tissue.
- b. Marasmus and kwashiorkor.
- c. Type 1 and type 2 diabetes.
- d. Emulsifiers and stabilisers.

Q5: Write on Three only of the following (15 marks):

- a. Virilizing and anabolic effects of testosterone.
- b. Complications of diabetes.
- c. Causative conditions of secondary malnutrition.
- d. Fat-soluble vitamins.
- e. Gastric bypass surgery.

Good Luck
Dr. Sohair M. M. Ragab



Assiut University
Faculty of Science
Zoology Department



Second Semester /General Zoology
Exam /June 2015
For Petroleum Geology students



Time: 2 hour
Level: First
Course Code: 100

Answer the following questions (50 marks)

Note: The exam in Six pages

First question: (Choose the best single correct answer) (10 marks)

1. *Amoeba* sp. belongs to.....
a) Parazoa b) Mesozoa c) Eumetazoa d) None of them
2. What type of gland secretes its product directly into blood stream?
a) Endocrine b) Unicellular c) Exocrine d) Goblet cell
3.control(s) what enters and leaves the nucleus.
a) DNA b) Nuclear pores
c) Cell membrane d) Nucleoplasm
4. Which one of the following is not found in animal cell?
a) Cell membrane b) Lysosomes c) Centrioles d) Cell wall
5. Which of the following has stages arranged in the sequence in which they occur?
a) Morula - -> blastula - -> cleavage b) Egg - -> gastrula - -> morula
c) Gastrula - -> blastula - -> morula d) Zygote - -> morula - -> blastula
6. The cytoskeleton of the animal cell includes
a) Microtubules b) Microfilaments
c) Intermediate filaments d) All
7. Primary spermatocytes become secondary spermatocytes by.....division
a) 1st meiotic b) 2nd meiotic c) 1st mitotic d) 2nd mitotic
8. The first invertebrates to develop nervous system are.....
a) Sponges b) Annelids c) Flat worms d) Cnidarians

9. Which of the following is highly vascularized?

- a) Cartilage b) Simple epithelium
c) Stratified epithelium d) Areolar C.T.

10. Tendon is a structure which connects.....

- a) a bone with another bone
b) a muscle with a bone
c) a nerve with a muscle
d) a muscle with a muscle

11.is the site of ribosome production.

- a) Nucleus b) Nucleolus c) Synthesis of proteins d) RER

12.hormone increases the level of glucose in the blood.

- a) Insulin b) Glycogen c) Glucagon d) Growth

13. The first name of epithelium refers to.....

- a) No. of cells b) shape of cells c) No. of layers d) No. of nuclei

14. The chromatin of eukaryotic nucleus consists of.....

- a) DNA+RNA b) DNA only c) DNA+ribosomes d) DNA+histones

15. Mitochondria are self-replication organelles due to.....

- a) The presence of cristae b) The presence of their own DNA
c) The ability to produce energy (ATP) d) Cellular respiration

16. Which hormone regulates the biological clock of vertebrates?

- a) Melanin b) Calcitonin c) TSH d) Melatonin

17. Which of the following is the correct scientific name for a human being?

- a) *Homo Sapiens*
c) *homo Sapiens*

18. Which of the following is False about the cell membrane?

- a) Semi-permeable b) Composed of proteins only
c) A double membrane d) Covered with cell coat

19. The transport of secretory proteins takes place through organelles in the order

- a) RER>Transport vesicle>Golgi>Secretory vesicle
b) Transport vesicle>RER>Golgi>Secretory vesicle
c) RER>Transport vesicle>Secretory vesicle>Golgi
d) RER->Golgi->Transport vesicle Secretory vesicle

20. If two organisms are in the same class, they must also be in the same:

- a) Order b) Species c) Family d) Phylum

Second question: Match each of the following with its single correct answer (5 marks)

Column 1	The answer	Column 2
(A) Flat worm with incomplete digestive system	(8)	1. Sponges
(B) Reproduce sexually by conjugation		2. Phylum Annelida
(C) Causes sleeping sickness disease		3. Phylum Arthropoda
(D) Segmented worms and includes leeches		4. Phylum Chordata
(E) Includes scorpions, spiders, insects and crabs		5. Phylum Cnidaria
(F) Unsegmented Pseudocoelomate animals		6. The earth worm
(G) Has a stinging cells called cnidocytes		7. Phylum Nematoda
(H) Defined the species		8. <i>Fasciola</i> sp.
(I) Belong to parazoa		9. <i>Trypanosoma</i> sp.
(K) Segmented worm with closed circulatory system		10. <i>Paramecium</i> sp.
(L) With notochord and dorsal hollow nerve cord		11. Ray
(M) Established the current classification system		

Third question: Answer the following (10 marks)

- Which germ layer gives rise to nervous system? (.....)
- The deficiency of iodine in food causes a disease known as
(.....)
- Are vesicles with digestive and hydrolytic enzymes inside to break down the things the cell no longer need. (.....)
- A science of biology deals with the formation, structure and function of cells. (.....)
- Which membranous organelles are involved in protein synthesis? (.....)
- The movement of liquid materials across the cell membrane is known as..... (.....)
- Which cells support and protect neurons? (.....)
- A type of cartilage with extensive collagenous fibers. (.....)

9. The deficiency of insulin in the blood causes a disease known as ...
(.....)
10. What is the name of the body cavity that is completely surrounded by
tissue derived from the mesoderm? (.....)
11. Which hormone regulates the sodium level in the blood? (.....)
12. Inside the cell, the colloid medium in which all the organelles float is called...
(.....)
13. The control center of the cell and contains genetic material (DNA).
(.....)
14. A type of eggs with little amount of yolk distributed uniformly in the egg.
(.....)
15. Which organelles modify, sort and package proteins in the cell?
(.....)
16. A type of neurons that transmits the nerve impulse to the brain.
(.....)
17. When many processes arise from the body of neuron, the neuron is called....
(.....)
18. What type of epithelial lines the urinary bladder? (.....)
19. The union of sperm and an ovum to form fertilized egg is known as....
(.....)
20. A type of fibers that made of elastin. (.....)

Fourth question. Answer five only of the following. (15 marks)

1. Compare between chordates and invertebrates.

	Chordates	Invertebrates
(1)		
(2)		
(3)		

2. List Three general characters of insects.

- a).....
b).....
c).....

3. Write Three hormones and mention their functions of the pituitary gland.

- a).....
b).....
c).....

4. Define the following:

- a) Embryology
b) Cleavage.....
c) Oogenesis

5. What are the main differences between each pair of the following?


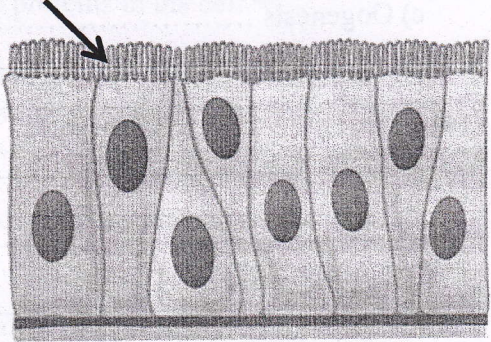
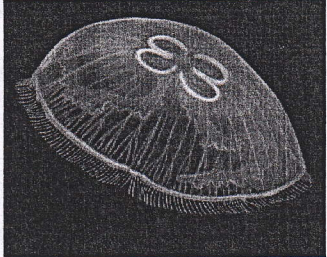
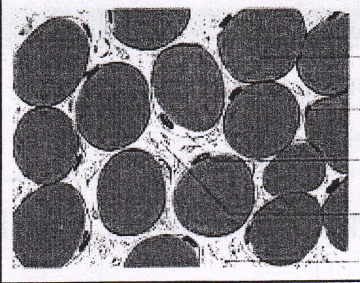
(a)	Prokaryotes	Eukaryotes
(1)		
(2)		

(b)	Simple passive diffusion	Facilitated passive diffusion

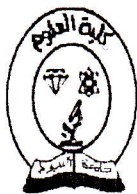
6. Complete the following table about areolar connective tissue and simple columnar epithelium.

Tissue type	Matrix amount	Vascularity	Cellularity	Nerve supply	Functions One only	Origin
areolar connective tissue						
simple columnar epithelium					Secretion	

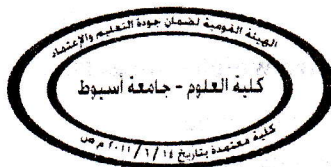
Fifth question: Answer Five only of the following (10 marks)

<p>(a) Draw a labeled diagram of animal cell membrane</p>	<p>(b) Draw a labeled diagram of gastrula stage</p>
 <p>(c) Tissue name:..... description:..... Location:.....</p>	 <p>(d) Tissue name: Location: Function (1 only):..... The arrow refers to:.....</p>
 <p>(e) Is it medusa or poly?..... Write type of symmetry:-..... How many germ layers form this animal?..... Does this animal has mouth and anus?.....</p>	 <p>(f) Identify the tissue..... Description..... Location Function (1 only).....</p>

By Dr. Zeinab Elbakary
With my best wishes



Assiut University
Faculty of Science
Zoology Department



Second Semester /General Zoology
Exam /June 2015



Time: 2 hour
Level: First
CourseCode: 100Z

Answer the following questions (50 marks)

Note: The exam in Six pages

Q: Choose the best single correct answer (10 marks)

- What type of gland secretes its product directly into blood stream?
a) Endocrine b) Unicellular c) Exocrine d) Goblet cell
-control(s) what enters and leaves the nucleus.
a) DNA b) Nuclear pores
c) Cell membrane d) Nucleoplasm
- Which one of the following is not found in animal cell?
a) Cell membrane b) Lysosomes c) Centrioles d) Cell wall
- Which of the following has stages arranged in the sequence in which they occur?
a) Morula - -> blastula - -> cleavage b) Egg - -> gastrula - -> morula
c) Gastrula - -> blastula - -> morula d) Zygote - -> morula - -> blastula
- The cytoskeleton of the animal cell includes
a) Microtubules b) Microfilaments
c) Intermediate filaments d) All
- Primary spermatocytes become secondary spermatocytes by.....
a) Meiosis I b) Mitosis I c) Meiosis II d) Mitosis II
- The first invertebrates to develop nervous system are.....
a) Sponges b) Annelids c) Flat worms d) Cnidarians
- Amoeba* sp. belongs to.....
a) Parazoa b) Mesozoa c) Eumetazoa d) None of them
- Which of the following is highly vascularized?
a) Cartilage b) Simple epithelium
c) Stratified epithelium d) Areolar C.T.

10. Tendon is a structure which connects.....
- a) a bone with another bone b) a muscle with a bone
c) a nerve with a muscle d) a muscle with a muscle
11.is the site of ribosome production.
- a) Nucleus b) Nucleolus c) Synthesis of proteins d) RER
12. Fats are a type oftissue.
- a) Epithelial b) Connective c) Muscular d) Nervous
13. The first name of epithelium refers to.....
- a) No. of cells b) shape of cells c) No. of layers d) No. of nuclei
14. The chromatin material is formed of.....
- a) DNA+RNA b) DNA+ proteins c) DNA only d) Protein only
15. Mitochondria are self-replication organelles due to.....
- a) The presence of cristae b) The presence of their own DNA
c) The ability to produce energy (ATP) d) Cellular respiration
16. Which hormone regulates the biological clock of vertebrates?
- a) Melanin b) Calcitonin c) TSH d) Melatonin
17. Which of the following is the correct scientific name for a human being?
- a) *Homo Sapiens* b) *homo sapiens*
c) *homo Sapiens* d) *Homo sapiens*
18. Which of the following is False about the cell membrane?
- a) Selectively permeable b) Composed of lipids and proteins only
c) Control the movement of materials d) Covered with cell coat
19. The transport of secretory proteins takes place through organelles in the order
- a) RER>Transport vesicle>Golgi>Secretory vesicle
b) Transport vesicle>RER>Golgi>Secretory vesicle
c) RER>Transport vesicle>Secretory vesicle>Golgi
d) RER->Golgi->Transport vesicle Secretory vesicle
20. If two organisms are in the same class, they must also be in the same:
- a) Order b) Species c) Family d) Phylum

Q2 : Match each of the following with its answer**(5 marks)**

Column 1	The answer	Column 2
(A) Flat worm with incomplete digestive system	(8)	1. Sponges
(B) Reproduce sexually by conjugation		2. Phylum Annelida
(C) Causes sleeping sickness disease		3. Phylum Arthropoda
(D) Segmented worms and includes leeches		4. Phylum Chordata
(E) Includes scorpions, spiders, insects and crabs		5. Phylum Cnidaria
(F) Unsegmented Pseudocoelomate animals		6. The earth worm
(G) Has a stinging cells called cnidocytes		7. Phylum Nematoda
(H) Defined the species		8. <i>Fasciola</i> sp.
(I) Belong to parazoa		9. <i>Trypanosoma</i> sp.
(K) Segmented worm with closed circulatory system		10. <i>Paramecium</i> sp.
(L) With notochord and dorsal hollow nerve cord		11. Ray
(M) Established the current classification system		

Q3: Answer the following**(10 marks)**

1. Which germ layer gives rise to nervous system? (.....)
2. The deficiency of iodine in food causes a disease known as
(.....)
3. Are vesicles with digestive and hydrolytic enzymes inside to break down the things the cell no longer need.
(.....)
4. A science of biology deals with the formation, structure and function of cells.
(.....)
5. Which membranous organelles are involved in detoxification?
(.....)
6. The movement of liquid materials across the cell membrane is known as.....
(.....)
7. Which cells support and protect neurons?
(.....)
8. A type of cartilage with extensive collagenous fibers.
(.....)
9. Which hormone increases the level of glucose in the blood? (.....)

- 10. What is the name of the body cavity that is completely surrounded by tissue derived from the mesoderm? (.....)
- 11. Which gland produces adrenaline? (.....)
- 12. Inside the cell, the colloid medium in which all the organelles float is called... (.....)
- 13. The control center of the cell and contains genetic material (DNA). (.....)
- 14. A type of eggs with little amount of yolk distributed uniformly in the egg. (.....)
- 15. Which organelles modify, sort and package proteins in the cell? (.....)
- 16. A type of neurons that transmits the nerve impulse to the brain. (.....)
- 17. When many processes arise from the body of neuron, the neuron is called.... (.....)
- 18. What type of epithelial lines the urinary bladder? (.....)
- 19. The union of sperm and an ovum to form fertilized egg is known as.... (.....)
- 20. A type of fibers that made of elastin. (.....)

Q4 :Answer Five only of the following: (15 marks)

1. List Three general characters of insects.

- a).....
- b).....
- c).....

2. Compare between cartilages and bones.

	Cartilages	Bones
(1)		
(2)		
(3)		

3. Write **Three** hormones and mention their functions of the pituitary gland.

- a).....
 b).....
 c).....

4. Define the following:

- a) Embryology
 b) Cleavage.....
 c) Oogenesis

5. What are the main differences between each pair of the following?

(A)	Prokaryotes	Eukaryotes
(1)		
(2)		

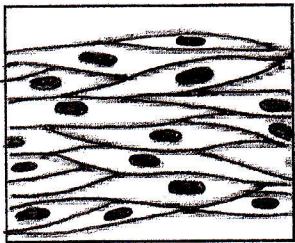
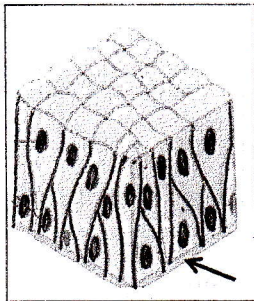
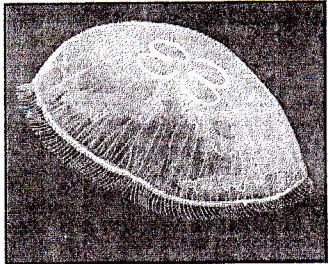
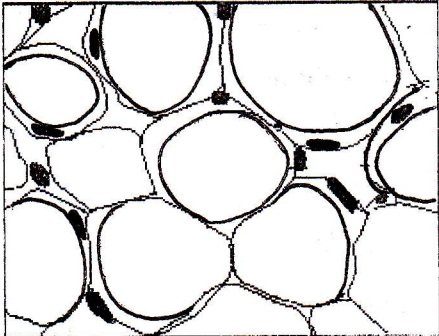
(B)	Simple passive diffusion	Facilitated passive diffusion

6. Complete the following table about areolar connective tissue and simple columnar epithelium.

Tissue type	Matrix amount	Vascularity	Cellularity	Innervated	Functions One only	Origin
areolar connective tissue			Few cells			
simple columnar epithelium					Secretion	

Q5: Answer Five only of the following

(10 marks)

<p>(a) Draw a labeled diagram of animal cell membrane</p>	<p>(b) Draw a labeled diagram of a mature sperm</p>
 <p>(c) Tissue name :</p> <p>Description:</p> <p>Location:</p>	 <p>(d) Tissue name:</p> <p>Location:</p> <p>Function (1 only):</p> <p>The arrow refers to:</p>
 <p>(e) Is it medusa or polyp?</p> <p>Write type of symmetry:</p> <p>How many germ layers form this animal?</p> <p>Does this animal has mouth and anus?</p>	 <p>(f) Identify the tissue.</p> <p>Description:</p> <p>Location</p> <p>Function (1 only)</p>

By Drs. Safaa, Fatma and Ali
With our best wishes