



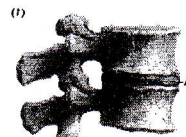
الامتحان في ٦ صفحات

I- Choose the correct answer and fill the circle in the answer sheet:

(Final 50 marks)

- 1- On the cell membrane, Glycoproteins make as
A. receptors B. bonds
C. coat D. pores
- 2- The movement of molecules against their concentration gradient is called
A. simple diffusion B. passive transport
C. active transport D. phagocytosis
- 3- The space between inner and outer membrane of mitochondria is called
A. intermembrane space B. intramembrane space
C. outermembrane space D. membrane space
- 4- The flexibility of the cell membranes results from the presence of
A. proteins B. lipids
C. carbohydrates D. all of them
- 5- The non-membranous organelles participate..... in cellular metabolism.
A. directly B. totally
C. don't participate D. indirectly
- 6- In the liver are responsible for neutralizing toxins.
A. RER B. SER
C. Golgi apparatus D. mitochondria
- 7- The only organelles that have their own DNA are
A. lysosomes B. microfilaments
C. Golgi apparatus D. mitochondria
- 8- On the outside of the cell membrane.. attached to some proteins and lipid.
A. chain of sugar B. ATP energy
C. digestive enzymes D. all of them
- 9- The transport in which larger materials are enter or exit from the cells is called
A. massive transport B. active transport
C. simple diffusion D. facilitated diffusion
- 10- The microtubule triplets which form the centriole composed of
A. 6 sets B. 9 sets
C. 4 sets D. 12 sets
- 11- The two membranes that surround the nucleus are known as
A. nuclear membrane B. nuclear folds
C. nuclear envelope D. nuclear processes
- 12- The hydrophilic parts of phospholipid molecules is
A. water insoluble B. lipid insoluble
C. lipid soluble D. water soluble
- 13- The circular DNA is present in
A. eukaryotic cells B. prokaryotic cells
C. mitochondria D. Golgi apparatus

- 14-is considered abounded tissue in our bodies.
 A. neural tissue B. epithelial tissue
 C. muscular tissue D. connective tissue
- 15- is a type of tissue have regeneration characteristics which replace rapidly the damage cell.
 A. epithelial cells B. connective tissue
 C. muscular tissue D. nervous tissue
- 16- Keratinized Stratified Squamous Epithelium is found in.....
 A. epidermis of skin B. mouth
 C. esophagus D. uterus
- 17- Epithelial tissue is avascular except in endocrine glands like.....
 A. sweat gland B. salivary glands
 C. thyroid gland D. goblet cell
- 18-is line urinary bladder.
 A. transitional epithelium B. simple squamous
 C. simple cuboidal D. stratified squamous
- 19- Epithelial cells rest
 A. on a basement membrane B. on a cartilage
 C. directly on a connective tissue D. on a bony surface
- 20- Epithelial tissue is characterized bywhich is Little extracellular material and small spaces between cells.
 A. cellularity B. polarity
 C. regeneration D. metaplasia
- 21- is a type of C.T characterized with lack blood vessels and nerves
 A. bone B. blood
 C. cartilage D. tendons
- 22- Plasma proteins of blood are.....
 A. muscles B. nerves
 C. cells D. fibers
- 23- What is the pointed part (A)?
 A. fibrocartilage B. elastic cartilage
 C. hyaline cartilage D. tendon
- 24- Areolar connective tissue is a type of
 A. connective tissue proper B. cartilage C.T
 C. bone C.T D. blood C.T
- 25-connective tissue found under the skin.
 A. areolar B. adipose
 C. reticular D. elastic
- 26- Loose Connective Tissue is surrounds blood vessels which consist of and many cells
 A. less fibers B. much fibers
 C. more fibers D. no presence of fiber
- 27- increases size and number of cells of almost body tissues that are capable of growing.
 A. Glucagon B. Thyroxin
 C. Growth hormone D. Oxytocin



- 28- regulates the kidneys retention of water.
- | | |
|------------|-------------|
| A. Insulin | B. Oxytocin |
| C. ADH | D. Thyroxin |
- 29- Increasing of GH secretion (\uparrow GH) in adults leading to.....
- | | |
|--------------|---------------|
| A. Dwarfism | B. Acromegaly |
| C. Gigantism | D. Goiter |
- 30- initiates uterine contraction during childbirth.
- | | |
|-------------|-------------|
| A. FSH | B. LH |
| C. Estrogen | D. Oxytocin |
- 31- plays a role in calcium hemostasis.
- | | |
|-------------|---------------|
| A. Thyroxin | B. PTH |
| C. ADH | D. Adrenaline |
- 32- Hypothyroidism in children leading to.....
- | | |
|--------------|-------------------|
| A. Cretinism | B. Gigantism |
| C. Mixdema | D. Endemic Goiter |
- 33- stimulates milk production.
- | | |
|-------------|--------------|
| A. Oxytocin | B. Prolactin |
| C. LH | D. FSH |
- 34- is a condition of hypocalcemia due to hypoparathyroidism.
- | | |
|------------------------|-----------------|
| A. Exophthalmic Goiter | B. Tetany |
| C. Cretinism | D. None of them |
- 35- secreted by adrenal cortex and reduces inflammation.
- | | |
|---------------|-----------------|
| A. Insulin | B. Aldosterone |
| C. Adrenaline | D. None of them |
- 36- Stimulates the thyroid gland to produce thyroxin.
- | | |
|--------|-----------------|
| A. TSH | B. Parathormone |
| C. ADH | D. Insulin |
- 37- triggers the changes in a boy's body which turn him from a boy to a man.
- | | |
|-----------------|-----------------|
| A. Estrogen | B. Thyroxine |
| C. Testosterone | D. None of them |
- 38- The adrenal medulla releases in times of stress and increases during fight.
- | | |
|---------------|----------------|
| A. Adrenaline | B. Aldosterone |
| C. Cortisol | D. Insulin |
- 39- The coelom is present in
- | | |
|--------------|-----------------|
| A. Human | B. Nematoda |
| C. Trematoda | D. Both a and b |
- 40- Insects are grouped under
- | | |
|----------------|----------------------|
| A. Protozoans | B. Invertebrates |
| C. Vertebrates | D. None of the above |
- 41- In chordates, the long supporting rod that runs through the body is called the.....
- | | |
|---------------|--------------|
| A. Nerve cord | B. Notochord |
| C. Pharyngeal | D. Tail |
- 42- *Musca domestica* is the scientific name of.....
- | | |
|--------------|---------|
| A. House fly | B. Toad |
| C. Cockroach | D. Dog |

- 43- Multinucleation is a characteristics of.....
- | | |
|----------------|-----------------|
| A. Apicomplexa | B. Porifera |
| C. Ciliophora | D. Mastigophora |
- 44- Nephridia are excretory units of phylum.....
- | | |
|--------------------|-------------|
| A. Nematoda | B. Annelida |
| C. Platyhelminthes | D. Porifera |
- 45- Trichocysts occur in.....
- | | |
|-------------|---------------|
| A. Hydrozoa | B. Porifera |
| C. Protozoa | D. ctenophora |
- 46- Insects are characterized by
- | | |
|---------------------|--------------------------|
| A. 3 pairs of legs | B. Two pairs of antennae |
| C. 3 pairs of wings | D. None of these |
- 47- Nematodes are characterized by absence of circulatory and respiratory systems and are considered.....animals.
- | | |
|---------------|--------------------|
| A. Acoelomate | B. Pseudocoelomate |
| C. Coelomate | D. Diploblastica |
- 48- Which one of the following is Not related to protozoa?
- | | |
|---------------------------------|-------------------------|
| A. Unicellular | B. Contractile vacuoles |
| C. Formed of tissues and organs | D. Eukaryotes |
- 49- The first invertebrates to develop jointed legs are.....
- | | |
|---------------|---------------|
| A. Sponges | B. Annelids |
| C. Flat worms | D. Arthropods |
- 50- Which of the following is the correct scientific name for Human?
- | | |
|------------------------|------------------------|
| A. <i>Homo Sapiens</i> | B. <i>homo sapiens</i> |
| C. <i>Homo sapiens</i> | D. <i>homo Sapiens</i> |

II- Choose the correct answer (Mid Term + Oral + Activity):

(30 marks)

- 51- Proteins in the cell membranes are responsible for takes place by:
- | | |
|----------------------------------|---------------------|
| A. facilitated passive diffusion | B. active transport |
| C. massive transport | D. permeability |
- 52- The intermediate filaments are made of protein
- | | |
|----------------|--------------|
| A. collagenous | B. reticular |
| C. fibrous | D. tubular |
- 53- The proteins that made by free ribosomes are
- | | |
|-------------------------|--------------------|
| A. secreted by the cell | B. form enzymes |
| C. stay in the cytosol | D. form antibodies |
- 54- Lysosomes contain to breakdown waste materials.
- | | |
|----------------------------|----------------------|
| A. digestive carbohydrates | B. digestive lipids |
| C. ATP | D. digestive enzymes |
- 55- The ribosomes are formed in the
- | | |
|--------------|------------|
| A. nucleolus | B. nucleus |
| C cytoplasm | D RER |

- 56- The molecules that make the cell membrane less permeable and decrease flexibility are.....
- A. carbohydrates
B. lipids
C. cholesterol molecules
D. some vitamins
- 57- Ribosomes are the factories of.....
- A. proteins
B. lipids
C. carbohydrates
D. lipoproteins
- 58- Bones consist mainly of.....
- A. chondrocytes
B. mast cells
C. osteocytes
D. lymphocytes
- 59- All motor neurons are.....
- A. unipolar
B. bipolar
C. multipolar
D. neuroglia
- 60- In the central nervous system, glial cells include.....
- A. oligodendrocytes
B. Schwann cells
C. satellite cells
D. neurons
- 61- Types of neurons are transmitting information between sensory and motor neurons within the CNS are.....
- A. sensory neuron b- interneuron
B. interneuron
C. multipolar neuron
D. motor neuron
- 62-are consist of double membranes which tightly together by desmosomes and they are the major portal for cardiac cell-to-cell communication
- A. filaments
B. intercalated discs
C. cilia
D. cell membrane
- 63- An axon transmits a nerve impulse at a specialized junction with another neuron called.....
- A. reflex arc
B. neuralgia
C. synapse
D. association neuron
- 64- The muscles of heart consist of.....
- A. smooth muscles
B. skeletal muscles
C. cardiac muscles
D. fibers
- 65- is a potent antioxidant with anti-aging properties secreted by pineal gland.
- A. Growth hormone
B. PTH
C. Adrenaline
D. Melatonin
- 66- is the formation of female gametes.
- A. Fertilization
B. Oogenesis
C. Spermatogenesis
D. Homeostasis
- 67- egg has little yolk distributed uniformly through the egg cytoplasm.
- A. Telolecithal
B. Centrolecithal
C. Isolecithal
D. None of them
- 68- is a repeated mitotic division of zygote.
- A. Fertilization
B. Cleavage
C. Gametogenesis
D. Organogenesis
- 69-is a hollow sphere of divided cells.
- A. Blastula
B. Gastrula
C. Morula
D. None of them

- 70- Middle piece in sperm structure contains.....
- | | |
|--------------------|------------------|
| A. Golgi apparatus | B. Lysosomes |
| C. RER | D. Mitochondrion |
- 71- rearranges the blastula to form two-layered embryo.
- | | |
|------------------|------------------|
| A. Organogenesis | B. Cleavage |
| C. Gastrulation | D. Gametogenesis |
- 72- Budding and binary fission are two types of
- | | |
|------------------------|-------------------------|
| A. Sexual reproduction | B. Asexual reproduction |
| C. Parthenogenesis | D. None of them |
- 73- Amoeba locomote with the help of
- | | |
|-------------|----------------|
| A. Cilia | B. Pseudopodia |
| C. Flagella | D. Lobopodia |
- 74- Paramecium locomotion by
- | | |
|-------------|----------------|
| A. Flagella | B. Pseudopodia |
| C. Cilia | D. Pellicle |
- 75- In Euglena locomotion by
- | | |
|----------------|-------------|
| A. Cilia | B. Flagella |
| C. Pseudopodia | D. Myonemes |
- 76- Reason for including amoeba in phylum protozoa is
- | | |
|---------------------------|------------------------|
| A. Cell wall | B. Contractile vacuole |
| C. Acellular organization | D. Phagocytosis |
- 77- Osmoregulation in amoeba is controlled by
- | | |
|----------------|-------------------------|
| A. Plasmalemma | B. Plasma gel |
| C. Exo osmosis | D. Contractile vacuoles |
- 78- Malaria fever is caused by
- | | |
|----------------------------|---------------|
| A. <i>Plasmodium vivax</i> | B. Monocystis |
| C. Cockroach | D. Mosquito |
- 79- Platyhelminthes are generally called
- | | |
|--------------------|----------------|
| A. Flat worms | B. Round worms |
| C. Tubiculus worms | D. Blind worms |
- 80- Which phylum has highest number of species?
- | | |
|---------------|-------------|
| A. Protozoa | B. Porifera |
| C. Arthropoda | D. Insecta |

Best Wishes

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Faculty of Science

Assiut University

Dept. of Zoology

Exam of Animal Ecology Code No. 225Z

Credit hour system 2nd level. Year 2020-2021

Time allowed: 2 hours

أجب عن الأسئلة الآتية: (لاحظ أن الأسئلة تقع في ورقتين)
س ١: اختر الإجابة الصحيحة من بين الأقواس ثم اطمس الدائرة المقابلة في ورقة الإجابة المعدة لذلك
بالقلم الجاف:

- 1-Saprophytes include: a-(Fungi) b-(Bacteria) c- (mushrooms) d-(all).
- 2-Carnivores include: a-(Predators) b-(Scavengers) c-Cannibalism d-(all).
- 3-Light affects a-(the color of animals) b- (morphology) c- (behavior) d-(all).
- 4-Euthermes are a-(widely distributed) b-(restricted in their distribution) c- (moderate in distribution) d-(all).
- 5- The temperature affects a-(the physiology of animals) b- (life cycles of animals) c- (development of the organism) d-(all).
- 6-The maximum rate at which a population can increase under ideal conditions is known as a- (biotic potntial) b- (biotic potential) c- (biotic potentil) d-(biotic potentiale).
- 7-A few numbers of young is characteristic of a-(short lived animals) b- (long lived animals) c- (animals that reproduce once in their life) d- (all).
- 8- The organisms that break down wastes and dead organisms are known as a-(decomposers) b- (producers) c- (consumers) d-(all).
- 9- The a-(carrying capacity) b-(biotic potential) c-(biotic factor) d-(all) represents the highest population that can be maintained for an indefinite period of time by a particular environment.
- 10- The population includes similar a-(individuals) b- (community) c- (ecosystems) d- (all).
- 11- a-(The decomposers) b-(Fungi) c- (Bacteria) d- (all) play a good rule in recycling of materials.
- 12- a-(fitness) b-(carrying capacity) c- (Homeostasis) d-(community) is the ability of an organism to reproduce successfully.
- 13- a-(Competition) b-(Climax communities) c- (Homeostasis) d-(Biomes) is the maintenance of conditions within the range that the organism can tolerate.
- 14- a-(Parthenogenesis) b-(Climax communities) c- (Homeostasis) d-(Biomes) is a type of reproduction.
- 15- The greatest amount of energy in a community is present in a-(producers) b-(predators) c- (consumers) d-(parasites).
- 16- a-(Monogamy) b-(Polyandry) c-(polygyny) d-(all) is the formation of a pair bond between one male and one female.
- 17- Consumers include a-(all heterotrophs) b- (bacteria) c-(Biosphere) d-(all plants).
- 18- a-(Transpiration) b- (Homeotherms) c-(Biosphere) d-(Secondary consumers) includes water, soil and air.
- 19- a-(Transpiration) b-(Homeotherms) c-(Biosphere) d-(Secondary consumers) feed on 1st consumers.
- 20- a-(Transpiration) b-(Homeotherms) c-(Nocturnal animals) d-(Secondary consumers) are those which become active during night.
- 21- a-(Transpiration) b-(Homeotherms) c-(Nocturnal animals) d-(Secondary consumers) depend on internal heat production.
- 22- a-(Types of substrate) b- (Homeotherms) c-(Producers) d-(consumers) is considered one of the abiotic factors. أقلب الصفحة من فضلك

23- a-(Light) b-(Temperature) c-(water) d-(all) is the physical factor which has a bifold effects on the animals.

24- a-(Light) b-(Temperature) c-(water) d-(all) is the physical factor which affects the migration of birds.

25- a-(organic pollution) b-(Thermal pollution) c-(inorganic pollution) d- (all) is a kind of pollution arises from building dams and barrages on rivers.

26- a- (the density) b-(natality rate) c-(mortality rate) d-(all) is the number of individuals per unit of space.

27- a-(monogamy) b-(polyandry) c-(polygyny) d-(all) is the formation of a pair bond between one female and two males.

28-The number of births in a given time period is known as a-(natality rate) b-(natlity rate) c-(nataliy rate) d- (all).

29-A relationship in which one organism benefits while the other is harmed is known as a-(cannibalism) b-(parasitism) c-(mutualism) d-(all).

30-The class of organisms found on the top of food pyramid are known as a-(consumers) b-(herbivorous) c- (producers) d-(all).

س ٢: ضع علامة صح أمام العبارة الصحيحة (T=True) وعلامة خطأ (F=False) أمام العبارة الخاطئة ثم اتمس الدائرة المقابلة في ورقة الإجابة المعدة لذلك بالقلم الجاف:

31- The biosphere includes many complex ecosystems ()

32- The limiting factor determines the types of organisms which may exist in the environment ()

33- Mutualism is the maintenance of conditions within the range that the organism can tolerate ()

34- Thermal pollution may increase diseases, and parasites as well as the decomposition of organic matter in the ecosystem ()

35- Oncology is the science dealing with the interactions between organisms and their environment ().

36- The community includes all the populations in a given area ().

37- The ecosystem includes all the members of the community plus the physical environment in which they live in ()

38- Cannibalism is a relationship in which one organism benefits and the other is not affected. ()

39- Endothermy refers to animals which control their body temperature by external means ()

40-Heterotherms refers to species that sometimes regulate their body temperature and sometimes do not ().

41- Interspecific competition occurs among individuals of the same species for environmental resources ()

42- Intraspecific competition occurs among individuals of the same species for environmental resources ()

43- The photoperiod is the factor which affects the migration of birds ().

44- Intraspecific competition occurs among two populations for environmental resources ().

45- Parasitism is a relationship in which one organism benefits and the other is harmed ().

46- Interspecific competition occurs among individuals of two different species for environmental resources ()

47- Parthenogenesis is a type of dispersion ().

48- Organisms that feed on green plants are primary consumers, or herbivores ().

49- Secondary consumers, feed on primary consumers ().

50- Territory is a situation in which an animal defends an exclusive area not shared with rivals ()

أقلب الصفحة من فضلك

س٣: اختر الإجابة الصحيحة من بين الأقواس ثم اطمس الدائرة المقابلة في ورقة الإجابة المعدة لذلك بالقلم الجاف: (السؤال بديلاً عن أعمال منتصف الترم + الشفوي + النشاط) (٣٠ درجة):

- 51- The population includes a- (one species) b-(more than two species) c- (one community) d-(two communities).
- 52- The ecosystem includes a-(a biotic factor and abiotic factor) b-(biotic factor only) c- (abiotic factor only) d- (living factor only).
- 53- The community includes: a-(one species) b-(different species) c- (abiotic factor) d- (substrate).
- 54- a-(monogamy) b-(polyandry) c-(polygyny) d-(all) is the formation of a pair bond between one female and one male.
- 55-In competition; two populations can a- (Coexist) b-(The weaker will eliminate the stronger) c-(both of them will be eliminated) d-(both a and b are right).
- 56-The visible light includes: a-(Ultra violet light) b-(Infra-red) c-(the well-known 7 colors) d-(micro waves).
- 57-The animals which are active during day time are known as a-(diurnal) b-(nocturnal) c- (Invertebrates). d-(vertebrates).
- 58-Light affects a-(the color of animals) b- (morphology) c-(reproduction) d- (all).
- 59- The animals which are active during night are known as a-(diurnal) b-(nocturnal) c- (Invertebrates) d-(Vertebrates).
- 60- The physical factor which has a bifold effect on animals is a-(temperature) b-(light) c- (UV) d-(all) .
- 61- a-(monogamy) b-(polyandry) c-(polygyny) d-(all) is the formation of a pair bond between one male and two females.
- 62- a- (Green plants and other photosynthetic organisms) b- (heterotrophs) c- (predators) d- (consumers) are the organisms in an ecosystem that can convert radiant energy from sunlight into food.
- 63- a-(Green plants and other photosynthetic organisms) b- (herbivores) c- (primary consumers) d- (secondary consumers) are the organisms in an ecosystem that are found on the top of food pyramid.
- 64- a-(Green plants and other photosynthetic organisms) b- (herbivores) c- (primary consumers) d- (secondary consumers) are the organisms in an ecosystem that are found on the base of food pyramid.
- 65- a- (Mutualism) b- (Parasitism) c- (Cannibalism) d- (Predation): is the relationship in which both organisms benefit from each other
- 66- a- (Mutualism) b- (Parasitism) c- (Cannibalism) d- (Predation): is the relationship in which one organism benefits and the other is harmed.
- 67- a- (Mutualism) b- (Parasitism) c- (Cannibalism) d- (Predation): is the relationship in which one organism eats other individual of the same species.
- 68- a- (Mutualism) b- (Parasitism) c- (Cannibalism) d- (Predation): is the relationship in which one organism kills and eats other individual.
- 69- Stenotherms are a-(widely distributed) b-(restricted in their distribution) c- (moderate in distribution) d-(all).
- 70- a-(Herbivores) b-(Predators) c- (Omnivores) d- (Scavengers) are those organisms which feed on the remains of animals they did not kill.
- 71- a-(Herbivores) b-(Predators) c- (Omnivores) d- (Producers) are those organisms which consume both plants and animals.
- 72 a-(Herbivores) b-(Predators) c- (Omnivores) d- (Producers) are those organisms which consume plants only.
- 73- The thermal energy consumed in photosynthesis is nearly a-(0.03%) b-(.003%) c-(.0003) d-(.0003) from the total solar energy. اقلب الصفحة من فضلك

74- a-(Herbivores) b-(Predators) c- (Omnivores) d- (Producers) are those organisms which kill and consume their prey.

75- Camels store water in a- (stomachs) b- (humps) c- (Intestine) d- (brain).

76- Camels store fats in a- (stomachs) b- (humps) c- (Intestine) d- (brain).

77- The air is considered dry when relative humidity a- (less than 50%). b- (more than 50% and less 70%). c- (between 70% -100%). d- (less than 40%).

78- The air is considered Medium in humidity when relative humidity a- (less than 50%). b- (more than 50% and less 70%). c- (between 70% -100%). d- (less than 40%).

79- The air is considered very humid when relative humidity a- (less than 50%). b- (more than 50% and less 70%). c- (between 70% -100%). d- (less than 40%).

80- About a-(30%) b- (40%) c- (50%) d- (60%) of solar radiation reflects again into sphere by the effects of opposing currents.

Good Luck



Assiut University

Date: 2-7-2021

Time: 2 hour



Faculty of Science
Zoology Department

**Final exam of Cytology course (210Z)
Second term (2020-2021)**

First: Final exam

I- Read the following statements and choose the most appropriate answer for each: (50 marks, 2 for each point)

1- In a cell, where steroids are produced?

- a. Nucleus
- b. Rough endoplasmic reticulum
- c. Cytoplasm
- d. Smooth endoplasmic reticulum

2- The Golgi is formed of:

- a. Cisternae of smooth membrane only
- b. Cisternae and vesicles
- c. Tubules of smooth membrane
- d. Rough endoplasmic reticulum

3- The enzymes secreted by rough endoplasmic reticulum are concentrated and packaged by

- a. Mitochondria
- b. Golgi apparatus
- c. Ribosomes

4- Pancreatic acinar cells are expected to be rich in

- a. Lysosomes
- b. Mitochondria
- c. Rough endoplasmic reticulum

5- The rough ER is specially well developed in cells actively engaged in

- a. Protein synthesis
- b. Nucleotide synthesis
- c. Lipid synthesis
- d. Secretory functions

6- The process by which a vesicle is formed at the plasma membrane to bring substances into the cell is called

- a. endocytosis
- b. exocytosis
- c. plasmolysis
- d. hemolysis

7- Lysosomes are present in all except

- a. muscle cells
- b. acinar cells
- c. erythrocytes
- d. hepatocytes

8- Which of the followings most correctly identifies the sequence of organelles involved in the production and secretion of proteins?

- a. Ribosomes, Golgi apparatus, secretory vesicles, rough endoplasmic reticulum, cell membrane
- b. Ribosomes, rough endoplasmic reticulum, Golgi apparatus, secretory vesicles, cell membrane
- c. Rough endoplasmic reticulum, ribosomes, secretory vesicles, Golgi apparatus, cell membrane

9- The membrane proteins that extend through both sides of lipid bilayer are:

- a- Acidic proteins
- b- Integral proteins
- c- Glycoproteins

10- The process that is called: "cell drinking" is:

- a- Endocytosis
- b- Exocytosis
- c- Pinocytosis

11- The presence of an intermembrane that is folded to form cristae is a characteristic of:

- a- Lysosomes
- b- Mitochondria
- c- Golgi apparatus

12- Mitochondria is not found in:

- a. Liver cells
- b. Nerve cells
- c. Mature leucocytes
- d. Mature RBCs

13- What are the folds on the inner mitochondrial membrane called?

- a. Plasmalemma
- b. b. Glycocalyx
- c. Protoplasm
- d. Cristae

14- The glycocalyx is formed of:

- a. Pure lipids and proteins
- b. Pure carbohydrates
- c. Glycoproteins and glycolipids
- d. Calcium

15- Centrioles are related to:

- a- Protein synthesis
- b-cell division
- c- DNA synthesis

16- How thick is plasma membrane?

- a. 8 – 10 angstroms
- b. 8 – 10 nanometers
- c. 8 – 10 nanometers
- d. 8 – 10 millimeters

17- The hydrophobic ends of phospholipid molecules are:

- a. Polar
- b. Non polar
- c. Neutral
- d. Bipolar

18- The lipid bilayer of the cell membrane is made up of:

- a. Phospholipids and cholesterol
- b. Phospholipid only
- c. Phosphoprotein

19- If all the ribosomes of a cell were destroyed, then will not take place

- a. Respiration
- b. Protein synthesis
- c. Photosynthesis

20- Acrosome is formed by:

- a. Mitochondria
- b. Golgi apparatus
- c. rER

21- Cells that secrete extracellular lysosomal enzymes are:

- a. Osteoblast
- b. Osteoclast
- c. Chondrocytes

22- The cell structures that break down nutrient molecules and old cell parts are known as:

- a. Ribosomes
- b. Lysosomes
- c. Vacuoles
- d. Chloroplasts

23- The movement of materials through a membrane without the use of enough energy is known as:

- a. Passive transport
- b. Photosynthesis
- c. Active transport
- d. Fermentation

24- Ribosome is formed of :

- a- 3subunits
- b-2 subunits
- c-4subunits

25- Eukaryotic chromosome is made of:

- a- DNA
- b-DNA+lipid
- c-DNA+proteins

Second: Mid- term and oral exam

II. Mention whether each of the following statements is true (T) or false (F) and correct the false one: (30 marks, 2 for each point)

SN	Statement	T or F
1.	Strong adhesion between cells need gap junctions	
2.	Golgi apparatus is called suicide bags	
3.	Rough endoplasmic reticulum plays a role in detoxification	
4.	In lipid bilayer, the phospholipid molecules are arranged in such a fashion that their hydrophobic ends are directed outwards	
5.	Krebs cycle takes place in mitochondrial matrix	
6.	Acrosome is formed by Golgi body	
7.	Cell coat consists of glycolipids and phospholipids	
8.	Tattoo marks are endogenous pigments	
9.	Prokaryotic cells have a cell wall outside the plasma membrane	
10.	The centriole is composed of 27 microtubules arranged in doublets	
11.	Melanin pigment is present in the cells of hair and skin	
12.	Dust pigments are endogenous pigments	
13.	Haemoglobin and haemosidrin are endogenous pigments	
14.	Cell inclusions are living structures	
15.	With EM, alpha glycogen particles appear as aggregations of rosette-shaped particles	

**With best wishes
Dr/ Shaimaa Mahmoud Saleh**

Assiut University
Faculty of Science
Zoology Department



University required
All levels
Time: two hours

Second term Final Exam 2020/1021 (June 2021)
Course title: Healthy feeding. (URO13)

Answer all the following questions:

First question (50 Marks):- Second term (Final Exam questions):-

a-Only answer by $\sqrt{}$ or X for these sentences:- (30Marks: one mark each):-

- 1-Monosaccharides are the most prevalent and there are several types, such as glucose, fructose and galactose. ()
- 2-After meal, part of absorbed glucose converted into liver glycogen (may reach 200 g) ().
- 3-The lipids consider the second source of energy (25% of body needs) : ()
- 4-Citric acid can not prevent antibrowning agents of enzymatic browning for some fruit or vegetables. ()
- 5-One role of nitrate as additive is to prevent gas formation. Ex. Nitrate is used in the production of cheese to prevent gas formation by butyric acid-forming bacteria.... ()
- 6- Antibrowning agents of non enzymatic browning of some foods is prevented by adding sulphur dioxide which in turn may destroy vitamin B in the foods..... ()
- 7-The higher amount of lipids in the body causes great leptin production. ()
- 8-Nicotine can not increase the basal metabolic rate (BMR) of men and women. ()
- 9-Dietary fibers decrease stool weight and decreasing gut transit time and meat slows down the transit time. ()
- 10-Additives can improve taste and flavouring as well as it improve texture. ()
- 11-One role of the antimicrobial additives is for more safety of food and prevent the growth of microorganisms. ()
- 12-There are some artificial coloring agents such as quinoline Yellow carmoisine used as additives and consider more safe than the natural ones. ()
- 13-Soluble fibers, include beans, nuts, flax seed, peas, some vegetables and fruits. (act as a colloidal mixture in intestine). ()
- 14-Basal metabolic rate for man of 70 Kg body weight equal 1680 calories, while for women of 70 Kg BW equal 1512 calories. ()

- 15-Many people over-eat and obesity in response to negative emotions, such as anger, sadness or boredom. ()
- 16-Excess intake of vitamin E leads to the deposition of calcium salts in soft tissues such as kidney and ureter forming stones. ()
- 17-Ghrelin secreted from gastric wall and it decreased gastric motility, bone formation and growth hormone secretion. ()
- 18-Carbohydrates are the main source of energy and the end product glucose with oxidation gives CO₂ and water (Safed energy). ()
- 19-Rods are responsible for vision in dim light. (They contain a photosensitive pigment called. ()
- 20-Ghrelin hormone inhibits insulin secretion and stimulate bone formation. ()
- 21-Leptin decreases metabolic rate and decreases appetite in humans. ()
- 22-Leptinis secreted by large mass of adipocytes into the circulation to reach the high centers in the hypothalamus. ()
- 23-Any group of food pyramiddoes not replace or replace each other because each has a different benefit. ()
- 24-The food pyramid contains the five main food groups that each person must get them. ()
- 25-The forth group of old food pyramidcontains vegetables and fruits: This group contains vegetarian foods, to supply the body with vitamins, minerals and fiber.... ()
- 26-Both vitamins C and K is a powerful antioxidants in the body cells. ()
- 27-Vitamin C deficiency delayed wound healing and caused osteoporosis. ()
- 28-Derived lipids include Cholesterol, Sex hormones, bile acids , and adrenal hormones. ()
- 29-Vitamin K deficiency caused prolonged clotting time. ()
- 30-Beets red dye: provide food with beet powder which used as artificial food coloring ()

b- Choose the appropriate letters A, B,C or D. (20 Marks: one mark each):-

31-Examples of simple proteins are:-

- A: Albumin Globulin and Cholesterol
- B Albumin, Globulin, and Gelatin
- C: Albumin, Globulin, phospholipids and Cephaline
- D: Albumin, Globulin, Collagen and lipids

32- The photosensitive pigment found in rods in the retina of the eye called rhodopsin or visual purple which synthesized by the help of :

- A: Vitamin B12
- B: Vitamin B1
- C: Vitamin A

-D: Not the above.

33-Edema disease can be induced in the case of shortage of:-

-A: Plasma fats.

-B: plasma protein

-C: RBCS.

-D: All the above.

34- Excess of vitamins in food leads to increase of probability of clot formation particularly in blood-disease patient and example of this vitamin is:-

-A: Vitamin K

-B: Vitamin C.

-C: Vitamin D

-D: Not the above.

35-Deficiency of vitamin D leads to:

-A: Bowed legs and deformity of the thorax and sternum (like "*pigeon chest*").

B: Rickets in young children : bowed legs and deformity of the thorax and sternum (like "*pigeon chest*").

-C: Osteomalacia in adults softening of skeleton due to demineralization

-D: All the above.

36- Ghrelin hormone secretion:-

A: Ghrelin secreted from stored fats.

B: Ghrelin secreted from gastric wall and pancreas during hungry.

C: Ghrelin secreted from intestine.

D: All the above.

37-Ghrelin hormone:-

A: Inhibits insulin secretion.

B: Ghrelin plays an important role in feeling of hunger,

C: Increases food intake and therefore weight gain increased.

D: All the above.

38- In the food pyramid:-

A: Replacing one food group with another is not permitted

B: Replacing one food group with another is permitted

C: Replacing food group by another with increasing meat and vitamin in the food.

D: Not the above.

39- Snacks cause obesity due to:-

- A: Its higher energy content.
B: Its reduced complex carbohydrates & fiber .
C: Its greater saturated fat.
D: All the above.

40- Leptin hormone:-

- A: Regulates bone mass
B: Increased heart rate
C: Regulate menstrual cycle, and activate immune cells.
D: All the above.

41- Calculation of basal of metabolic rate for man 70 Kg equal:-

- A: 2000 calories
B: 1680 calories
C: 2300 calories
D: Not the above

42- Causes of Obesity include:-

- A: Over-eating than body requirement of energy.
B: Increase energy expenditure in the body.
C: Avoid taking snacks and Junk food.
D: All the above.

43- Basal metabolic rate (BMR) is the rate of energy expenditure per unit time by endothermic animals at rest including processes such as:-

- A: Breathing, blood circulation,
B: Controlling body temperature
C: Brain , nerve function, and contraction of muscles.
D: All of the above.

44- The small upper part of the pyramid. This group includes:-

- A: meat, birds, fish, dried beans and eggs.
B: Oils, butter, cream, margarine, sugars, sweets.
C: bread, cereals, rice and pasta.
D: Vegetables and fruits.

45- Ghrelin hormone:-

- A: Increases bone formation
B: Increases gastric motility and growth hormone secretion.
C: Increases growth hormone secretion.
D: All the above.

46- There are factors affecting basal metabolic rate BMR such as:-

A: Diet - Severe calorie restriction reduces.

B: Increase body temperature will increase basal metabolic rate.

C: Food type - proteins increase BMR.

D: All the above.

47- One type of the dietary fibers is the soluble fibers such as:

A: Beans, nuts, , some vegetables and fruits. (act as a colloidal mixture in intestine.

B: Some vegetables and fruits. (act as a colloidal mixture in intestine.

C: Flax seed and peas.

D: All the above.

48- The main functions of dietary proteins include:-

-A: body builder

-B: The sources of all enzymes are proteins.

-C: Maintain the normal levels of plasma proteins which prevent edema.

-D: All the above.

49- Preservatives are additives such as:-

A: Antioxidants.

B: Antibrowning agents.

C: Coloring agent.

D: All the above except C.

50- Examples of antimicrobial preservatives:

A: Sodium benzoate.

B: Benzoic acid.

C: nitrate.

D: All the above.

Second question(50 Marks):- .(Mid term+ Oral + activity:) :-

Second question(50 Marks):- .(Mid term+ Oral + activity:) :-

a-Only answer by \sqrt or X for these sentences:- (30Marks: one mark each):-

51-Carbohydrates represent the major part of stored substances in the body , mainly in adipocytes: depot fats. - - - - -()

- 52- Disadvantages of additives include that it may led to Allergies: migraine, hyperactivity, and rashes. ()
- 53-E numbers are codes for food substances that are permitted to be used as food additives for use within the European Unionand Switzerland. ()
- 54-The Deficiency in the dietary fats may lead to deficiency A,D,E and K vitamins in the body. ()
- 55-Excess of vitamin C leads to the deposition of calcium salts in soft tissues such as stones in kidney and ureter. ()
- 56- Vitamin C deficiency causes scurvy disease. ()
- 57- Iron deficiency leads to general weakness , wasting,nervous tension , a sense of vomiting ,diarrhea and dehydration. ()
- 58-The rise of keto bodies which include acetone, beta hydroxyl buterate and aceto-acetic acid , in blood called ketonemia. ()
- 59- Potassium Regulate acid-base balance, and muscle excitability. ... ()
- 60-Addition of minerals such as iron and iodine for preventing nutritional deficiencies. ()
- 61-The most common additives used as sweeteners are high calorie sweeteners such as saccharin and aspartame. ... ()
- 62-Glycoprotein is a Protein conjugated with sugar such as heparin (anticoagulant), while Lipoprotein is a Protein conjugated with lipids. ... ()
- 63-Dietary fibers regulate peristaltic movements of the intestine. ... ()
- 64-Some flavoring agents act as enhancers of flavors to magnify or modify the flavor which already present in foods such as glutamic acid salts or glycine salts.... ()
- 65- The top of old food pyramidinclude oils, butter, cream, margarine, sugars, sweets and used in large quantity. ()
- 66-Nutritionists advise to eat the foods of the top of old food pyramidmoderately and in small quantitiesto maintain the health of the body. ... ()
- 67-Ghrelin plays an important role in feeling of hunger, food intake and therefore weight gain increased. ()
- 68-Resistance to leptin has not been found in obese humans. ()
- 69-Drug therapies have been associated with obesity as metabolic rate slows down, leading to gain weight increases. ()
- 70-Coffee and tea can help increase metabolic rate by up to 11%. ()
- 71- Dietary fibers can have not a satiating effect on appetite; helping in weight management. and prevent constipation, ()
- 72-DietaryProtein acts as body builder, . to build new tissue and to compensate the old consumed cells. ()
- 73- Vitamin D deficiency causes rickets in young children : Bowed legs and deformity of the thorax and sternum (like "*pigeon chest*") and oseomalacia in adults. ()
- 74-Snacks does not cause obesity due to higher energy content and Greater saturated fat..... ()

75-Antibrowning agents of enzymatic browning is due to exposure of fruit or vegetables to light and air which affect certain enzymes such as poly phenol oxidase. ()

76-One of role of nutritional additives to enhance the overall nutritive value of the food. ... ()

77-Caramelized sugar derived from burning sugar provide food with burning sugar color which used as artificial food coloring, ()

78-The physical activity of the person must be done daily as in new food pyramid, which is walking movement for 30 to 60 min for adult and 90 min for children. ... ()

79-Basal metabolic rate (BMR) is the rate of energy expenditure per unit time by endothermic animals at rest. ()

80- Lycopene red dye from tomatoes: provide food with red color which used as national food coloring, ()

b- Choose the appropriate letters A, B,C or D. (20 Marks: one mark each):-

81- Simple lipids are esters of fatty acids with alcohol for example as:

- A: Globulin and oils
- B: : Oils and butter
- C: Wax of honey bees
- D: B & C.

82- Function of vitamin K includes:-

- A: It is essential for synthesis and activation of some blood clotting factors.
- B: Formation of collagen.
- C: Ensure the maturation of gametes.
- D: A & C.

83- The examples of conjugated or compound proteins include:

- A: Albumin, globulin, collagen gelatin
- B: Nucleoprotein and Chromoprotein,
- C: Collagen Gelatin, heparin and Phosphoprotein
- D: All the above.

84- Function of vitamin B1 includes:-

- A: Decarboxylation of pyruvic into acetyl CoA
- B: Formation of collagen
- C: It increases the activity of acetyl choline at nerve endings by inhibiting acetyl choline esterase enzyme
- D: A & C

85-Some vitamins can be synthesized by intestinal bacteria such as:

- A: Vitamin A.
- B: Vitamin K & B .
- C: Vitamin K only.
- D: Not the above.

86-Obesity may be due to:-

- A: Leptin hormone deficiency
- B:Some drug therapies.
- C: Endocrine disorders.
- D: All the above.

87- Examples of Nutritional Additives include:-

- A: Amino acids to cereals to enhance protein quality.
- B:Sodium nitrite to increase nutritional value.
- C: Fiber additives increase in consumer dietary fiber.
- D: All the above except B.

88- Examples of artificial flavoring agents:-

- A: Manufacture taste like strawberry
- B: By adding of acetylpropionyl with plant oil for Butter.
- C: 3-Monosodium glutamate to Soya been to give meat flavor.
- D:All the above.

89- Advantages of additives include:-

- A: Provide wider variety of foods.
- B: To slow growth of microorganisms.
- C: Can increase the safety.
- D:All the above.

90- Leptin hormone:-

- A: Inhibits intracellular lipid concentration.
- B: Increases insulin sensitivity.
- C: Modulating inflammatory response.
- D: All the above.

91- Blood sugar between meals, is maintained at normal level by taking glucose from:

- A: The liver glycogen.
- B: The muscle glycogen.
- C: Gluconeogenesis takes place in the liver

-D: All the above except B.

92- Obesity is more dangerous

A: In children.

B: In adult.

C: In certain gender.

D: Not the above.

93- Ghrelin hormone:-

A: Helps to satiate the body.

B: Ghrelin is a hunger hormone.

C: Acts counter to the hormone leptin

D: All the above.

94- Functions of dietary fibers in the intestine include:-

A: It regulates peristaltic movements of the intestine.

B: It increases total blood cholesterol.

C: It Prevents coronary heart disease.

D: All the above except B.

95- Advantages of additives include:-

A: Increase shelf life - preservatives

B: Make food more appetising - colouring

C: Increase nutritive value

D: All the above.

96- The daily expenditure of basal metabolic rate in body consume:-

A: About $\frac{1}{4}$ of a person's daily expenditure.

B: About $\frac{1}{2}$ of a person's daily expenditure.

C: About $\frac{2}{3}$ of a person's daily expenditure.

D: Not on the above.

97- Base of the food pyramid contains:-

A: Vegetables and fruits

B: Bread, cereals, rice and pasta

C: butter, cream, margarine, sugars, sweets

D: meat, birds, fish,

98- After meal the fate of absorbed glucose is:

-A: Part of carbohydrate normalize blood sugar.

-B: Part converted into liver glycogen.

-C: Part converted into muscle glycogen.

-D: All the above.

99-New pyramid associates between:-

A: All types of food found in the food pyramid.

B: The guide that how much food to eat daily and the types of foods

C: The food pyramid and the physical activity of the person.

D: All the above.

100-The second group of food pyramid contains:-

A: Vegetables and fruits.

B: Oils, butter, cream, margarine, sugars, sweets,.

C: Meat, birds, fish, dried beans and eggs.

D: Bread, cereals, rice

With my best wishes and great success,

Professor Dr. Mohamed Bassam Al-Salahy Elbradei