



Test Bank

CHAPTER (1+8+9)

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Important notes:

1. Questions in **GREEN** are from Dr.Ziad Sheraideh exams in 2019 and they were collected by Marah Al-zoubi
2. Questions in **RED** are from Dr.Amer Amrish exams in 2019 and they were collected by Bayan Abuhlimeh
3. Questions in **BLACK** are created by me 😊
4. Questions in **PURPLE** are found in both exams with same choices

Chapter (1)

1- Which of the following is not a part of the cell theory?

- a) All organisms are composed or one or more cells.
- b) Cells arise only by division from a pre-existing cell.
- c) All cells make chemical activites.
- d) The cell is the structural and functional unit of life.
- e) all of these are a part of the cell theory.

2- Which of the following characteristic is a basic property of cells?

- a) Cells are highly complexed and organized.
- b) Cells possesses a genetic program and the mean to use it.
- c) Cells are capable of producing more of themselves.
- d) Cells acquire and utilize energy.
- e) All of these are correct.

3- Which of the following characteristic is not a basic property of cells?

- a) Cells have plasma membrane DNA and lysosomes.
- b) Cells engage in numerous mechanical activities.
- c) Cells generally responds to stimuli.
- d) Cells are capable of self-regulation.
- e) Cells evolve.

4- The first microscope created was by, it was

- a) Robert Hooke / Double lensed.
- b) Anton Leuwenhoek/ Double lensed.
- c) Robert Hooke / Single lensed.
- d) Anton Leuwenhoek/ Single lensed.
- e) All of these are wrong.

5- Are the first human cells isolated from a human, they're tumor cells.

- a) HeMa
- b) LuCa
- c) HeLa
- d) HeLa
- e) LuMa

6- The genetic material of a prokaryotic cell is present in a region of a cell.

- a) Genome
- b) Nucleoid
- c) Nucleus
- d) Pharmacopeia
- e) Chromatic region

7- Which is probably the single most important distinction between prokaryotes and eukaryotes?

- a) The existence of the Golgi complex.
- b) The separation of genetic material from the surrounding cytoplasm.
- c) The existence of ribosomes.
- d) The centrioles.
- e) The lysosomes and peroxisomes.

Hint: More than one answer is different between prokaryotes and eukaryotes, but we want the most important (from there name)

8- What characteristic distinguish prokaryotic and eukaryotic cells?

- a) Eukaryotes have membrane-bound organelles, prokaryotes don't.
- b) Prokaryotes have relatively little DNA, Eukaryotes have much more.
- c) Eukaryotic chromosomes are linear, Prokaryotic chromosomes are circular.
- d) Prokaryotic DNA is naked or nearly naked, Eukaryotic DNA is usually heavily associated with proteins.
- e) All of these are correct.

9- Which of the following is not a model organism?

- a) Mus musculus
- b) Drosophila melanogaster
- c) Homo sapiens
- d) Arabidopsis thaliana
- e) Caenorhabditis elegans

10- Which of the following is not a model organism?

- a) Escherichia coli
- b) Drosophila melanogaster
- c) Caenorhabditis elegans
- d) Saccharomyces
- e) Homo sapiens

Answers:

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|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| c | e | a | a | c | b | b | e | c | e |

Chapter (8)

1- Which of the following is a function of membranes? (This question was in both Dr.Amer and Dr.Ziad exams)

- a) Compartmentalization
- b) All of these are correct
- c) Mediate Intracellular interaction
- d) Helps cell to respond to external signals
- e) Selectively permeable barrier

2- What are the building blocks of a phosphoglyceride, specifically phosphatidic acid?

- a) Glycerol + 3 fatty acids
- b) Glycerol + 1 phosphate group + 3 fatty acids
- c) Glycerol + 1 phosphate group + 2 fatty acids
- d) Glycerol + 1 phosphate group
- e) Glycerol + 2 phosphate group + 1 fatty acid

3- What kind of membrane protein penetrates into the hydrophobic part of the lipid bilayer?

- a) Galactocerebroside
- b) Integral protein
- c) lipid-anchored protein
- d) Peripheral proteins
- e) Phosphatidylcholine

4- What kind of membrane protein is found entirely outside the bilayer on either the extracellular or cytoplasmic surface? These proteins are covalently linked to a membrane lipid situated within the bilayer?

- a) Integral protein
- b) Lipid- anchored protein
- c) Peripheral protein
- d) Carbohydrate- anchored protein
- e) Transmembrane protein

5- People who have the AB blood type possess

- a) An enzyme that adds glucose to the end of the oligosaccharide chain on RBC membrane glycolipids.
- b) An enzyme that adds N-acetylgalactosamine the end of the oligosaccharide chain on RBC membrane glycolipids.
- c) An enzyme that adds galactose to the end of the oligosaccharide chain on RBC membrane glycolipids.
- d) No enzyme that adds anything to the end of the oligosaccharide chain on RBC membrane glycolipids.
- e) B + C

6- People who have the A blood type possess

- a) An enzyme that adds glucose to the end of the oligosaccharide chain on RBC membrane glycolipids.
- b) An enzyme that adds N-acetylgalactosamine the end of the oligosaccharide chain on RBC membrane glycolipids.
- c) An enzyme that adds galactose to the end of the oligosaccharide chain on RBC membrane glycolipids.
- d) No enzyme that adds anything to the end of the oligosaccharide chain on RBC membrane glycolipids.
- e) B + C

7- The temperature at which a lipid bilayer shifts from a fluid state to a crystalline gel is called the

- a) pH optimum
- b) Gelation temperature
- c) Temperature optimum
- d) Transition series
- e) Transition temperature

8- What directly or indirectly determines the temperature at which a lipid bilayer shifts from a fluid state to a crystalline gel?

- a) Whether the fatty acid chains of the lipids are saturated or unsaturated
- b) The length of the fatty acid chains
- c) The extent to which the fatty acid chains of the lipids contain double bonds
- d) The ability of lipid molecules to be packed together
- e) All of these are correct

9- Which of the following lipids is found concentrated in lipid rafts in animal cell plasma membrane?

- a) Phosphatidylserine
- b) Phosphatidylinositol
- c) Phosphatidylcholine
- d) Cholesterol
- e) Phosphatidylethanolamine

10- They are more gated and highly ordered than the surrounding more fluid regions in artificial membranes that consist primarily of phosphoglycerides. They contain higher concentration of sphingolipids and certain proteins, what are they?

- a) Lipid islands
- b) collections
- c) Lipid rafts
- d) Lipid domains
- e) dense bilayer

11- A channel that opens in response to the binding of a specific molecule, which is usually not the solute that passes through the channel is called a

- a) Ligand-gated channel
- b) Voltage-gated channel
- c) Charge-gated channel
- d) Positive-gated channel
- e) Mechano-gated channel

12- A channel that opens in response to changes in ionic charge across a membrane is called a

- a) Electric-gated channel
- b) Positive-gated channel
- c) Charge-gated channel
- d) Ligand-gated channel
- e) Voltage-gated channel

13- The movement of water through a semipermeable membrane from a region of lower solute concentration is called

- a) Diffusion
- b) Metabolism
- c) Osmosis
- d) Denaturation
- e) Solubility

14- Transporting of materials where the diffusing substance binds selectively to a membrane-spanning protein, the process is called

- a) Simple diffusion
- b) Facillated diffusion
- c) Active transport
- d) Osmosis
- e) B + C

15- The Na⁺/K⁺ ATPase pump actively moves

- a) 2 Na⁺ out, 3 K⁺ in
- b) 3 Na⁺ out, 2 K⁺ in
- c) 3 Na⁺ in, 2 K⁺ out
- d) 1 Na⁺ out, 1 K⁺ in
- e) 2 Na⁺ in , 3 K⁺ out

16- Which of the following is an example of co-transport active transport?

- a) Na⁺/K⁺ ATPase
- b) Na⁺/glucose symport
- c) Glucose permease transport
- d) O₂ diffusion across a membrane
- e) Aquaporin water transport

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| b | c | b | b | e | b | e | e | d | c | a | e | c | b | b | b |

Chapter (9)

1- which of the following is not a function of Mitochondria?

- a) Synthesis of certain amino acids
- b) Uptake of Ca²⁺ ions
- c) Synthesis of cholesterol
- d) Release of Ca²⁺ ions
- e) Synthesis of heme groups

2- Inner mitochondrial membrane invaginated sheets, make.....

- a) Inner boundary membrane
- b) Cristae
- c) Pseudopodia
- d) Outer boundary membrane
- e) Matrix

3- What are the two interconnected domains of the inner mitochondrial membrane?

- a) inner boundary membrane, cristae
- b) Central boundary membrane, cristae
- c) Cristae boundary membrane, outer boundary membrane
- d) Inner boundary membrane, matrix
- e) Cristae, matrix

4- Oxidation of very long fatty acid chains occurs in:

- a) Peroxisomes
- b) matrix of mitochondria
- c) cytoplasm
- d) Intermembrane space of mitochondria
- e) A + B

5- is a specialized type of peroxisomes in plant seedling.

- a) Glucagon
- b) glycosamide
- c) glyoxysome
- d) glycogen
- e) All are false

6- Which of the following is a genetic disorder that affects the peroxisomes?

- a) premature-aging phenotype
- b) Zellweger syndrome (ZS)
- c) Adrenoleukodystrophy (X-ALD)
- d) A + B
- e) B + C

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|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| c | b | a | a | c | e |

قال الحسن بن علي: (أكثرُوا من الاستغفار في بيوتكم، وعلى موائذكم، وفي طرقكم، وفي أسواقكم، ومجالسكم، أينما كنتم، فإنكم لا تدرُونَ متى تنزل المغفرة)

[التوبة لابن أبي الدنيا] 