

Course No:
Course Title:
Date: 08/11/2012
Time: 1hours

University of Palestine



Midterm Exam
2012/2013
Total Grade: 20%

Instructor Name: _____
Student No.: _____
Student Name: _____
College Name: _____
Dep. / Specialist: _____

Question one

Multiple choice (5 marks)

1- Which statement is NOT true about bacterial anatomy?

- A) The cell wall is located outside of the plasma membrane.
- C) There have small circular DNA distributed in the cytosol.
- D) Bacteria may have pilli that help attach the bacteria to other structures.
- E) Bacteria have pili which are used for motility.

2- Which statement is NOT true about bacteria?

- A) Their cell wall is made of a layer that is the same as in plant cell walls.
- B) Some are photosynthetic.
- C) Some are motile due to flagella.
- D) They are all prokaryotes.
- E) They have a cell wall that contains peptidoglycan.

3- Which is NOT true of eukaryotic cells?

- A) A true nucleus contains the chromosomes.
- B) Eukaryotic cells contain membrane-bounded compartments.
- C) They contain ribosomes that are smaller than those of prokaryotic cells.
- D) They all contain mitochondria.
- E) They contain many organelles in the cytoplasm.

4- Cells that do NOT produce cell walls are.

- A) animal cells.
- B) plant cells.
- C) bacteria.
- D) prokaryotic cells.
- E) All of these make cell walls.

5- The nucleus is NOT important as the site of

- A) DNA synthesis.
- B) RNA synthesis. .
- C) Protein synthesis.
- D) All of these take place in the nucleus

6- All of the following are parts of plant cells EXCEPT.

- A) Mitochondria.
- B) Chloroplasts.
- C) Cell walls.
- D) Vacuoles.
- E) Non of the above.

7- All the following are in the structure of Adenosine Triphosphate (ATP) EXCEPT.

- A) Ribose sugar.

- B) The nitrogenous base.
- C) Glucose sugar.
- D) Phosphate group.

8- A cell present in a hypotonic environment.

- A) Water will diffuse into the cell.
- B) Water will diffuse out from the cell.
- C) The cell is in equilibrium.
- D) The cell will move to another place.

9- Active transport across the cell membrane.

- A) Does not require energy.
- B) Molecules move freely through the membrane.
- C) The direction of molecules movement is against concentration gradient.
- D) Molecules move in both directions.

10) Which of the following sentences is NOT true.

- A) Uniports move a single solute in one direction.
- B) Antiports channels move two solutes in opposite directions.
- C) Symports move two solutes in the same direction.
- D) Antiports channels work in passive transport.

Question Two:

Match the correct answers (5 marks)

- | | |
|--------------------------------|---|
| 1) A diploid cells | a) A higher solute concentration than the other solution with which it is being compared. 4 |
| 2) A haploid cells | b) Made primarily of carbon atoms. 9 |
| 3) A karyotype | c) Important source of energy in the cell. 7 |
| 4) A hypertonic solution | d) An example of active transport. 6 |
| 5) A hypotonic solution | e) All human cells, except reproductive cells. 1 |
| 6) The sodium–potassium pump. | f) Reproduction of bacteria. 8 |
| 7) ATP hydrolysis | g) Contain only one set of chromosomes. 2 |
| 8) Binary fission | h) A photograph of the chromosomes in a dividing cell. 3 |
| 9) Organic compounds | i) Secondary structure of proteins. 10 |
| 10) The α (alpha) helix | j) Cell lysis. 5 |

Question Three:

Specify the following sentences true (T) or false (F) (5 marks)

- 1- A carbon atom forms a maximum of three covalent bonds with other atoms. (T / F)
- 2- The breakdown of polymers occurs through a process known as hydrolysis. (T / F)
- 3- In carbohydrates, Carbon: Hydrogen: Oxygen in a ratio of 2:1:2 respectively. (T / F)
- 4- The primary structure of a protein means its folding to do specific function. (T / F)
- 5- In cell membrane, the polar head of the phospholipid directed to the interior of the membrane. (T / F)
- 6- The sugar in DNA is deoxyribose whereas in RNA the sugar is ribose. (T / F)
- 7- In simple diffusion, the movement of molecules through the cell membrane is up-concentration gradient. (T / F)
- 8- Sodium is the major extracellular ion. (T / F)
- 9- Receptor-mediated endocytosis is less efficient in up taking of materials into the cell than phagocytosis. (T / F)
- 10- In human cell, mitosis produce 2 daughter cells that contain the same number of chromosomes as the mother cell. (T / F)

Question Four:

Explain in brief (5 marks)

1- Exocytosis

2- Endocytosis

3- Uniport channels

4- Symports channels

5- Antiports channels

End of Questions
Good Luck