

Course No: DNTS 1301  
Course Title: General Biology  
Date: 18-05-2013  
No. of Questions: (4)  
Time: 2hours  
Using Calculator (No)

University of Palestine



Final term Exam  
2012-2013  
Total Grade: 60

Instructor: Dr. Essameddin Elzatma  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: Desentry  
Dep. / Specialist: \_\_\_\_\_  
Using Dictionary (No)

**Question 1: Multiple Choice (20 Marks)**

**1- Which of the following molecules stores hereditary information?**

- A. ATP                      B. DNA                      C. protein                      D. carbohydrates

**2- What is the name of the molecule in plants that stores sugars?**

- A. starch                      B. protein                      C. cellulose                      D. glycogen

**3- The eukaryotic nucleus houses all of the following except the**

- A. RNA                      B. DNA                      C. nucleolus                      D. endoplasmic reticulum

**4- Which of the followings is a type of active transport?**

- A. cytolysis                      B. diffusion                      C. ion channel                      D. endocytosis

**5- What process occurs that leads to the decrease in the cell's DNA mass?**

- A. prophase                      B. metaphase                      C. anaphase                      D. telophase/cytokinesis

**6- How do bacteria produce yogurt from milk?**

- A. by conjugation                      B. by fermentation  
C. by nitrogen fixation                      D. by aerobic respiration

**7- Which of the following is one reason why viruses are NOT considered living organisms?**

- A. Viruses are able to replicate.                      B. Viruses do not metabolize.  
C. Viruses can cause diseases.                      D. Viruses are too small to be easily observed.

**8- What are rod-shaped bacteria called?**

- A. cocci                      B. bacilli                      C. spirilla                      D. halophiles

**9- Crossing-over occurs during which process?**

- A. mitosis                      B. meiosis                      C. meiosis II                      D. interphase

**10- Which of the following statements about prokaryotic chromosomes is true?**

- A. Prokaryotes have at least two chromosomes.  
B. Prokaryotic chromosomes consist of a circular DNA molecule.  
C. Prokaryotic chromosomes include histone and nonhistone proteins.  
D. Prokaryotic chromosomes are made of DNA wrapped tightly around histone proteins.

**11- Genetic recombination in bacteria can occur during which process?**

- A. conjugation                      B. binary fission  
C. capsule formation                      D. endospore production

**12- What is the function of the mitochondria in the cell?**

- A. to make ATP                      B. to make proteins  
C. to make carbohydrates                      D. to move proteins through the cell

Course No: DNTS 1301  
Course Title: General Biology  
Date: 18-05-2013  
No. of Questions: (4)  
Time: 2hours  
Using Calculator (No)

University of Palestine



Final term Exam  
2012-2013  
Total Grade: 60

Instructor: Dr. Essameddin Elzatma  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: Desentry  
Dep. / Specialist: \_\_\_\_\_  
Using Dictionary (No)

**13- During diffusion, molecules tend to move in what direction?**

- A. the molecules involved in diffusion never move.
- B. in a direction that doesn't depend on the concentration gradient.
- C. from an area of lower concentration to an area of higher concentration.
- D. from an area of higher concentration to an area of lower concentration.

**14- The sodium-potassium pump transports which of the following?**

- A. both  $\text{Na}^+$  and  $\text{K}^+$  into the cell.
- B. both  $\text{Na}^+$  and  $\text{K}^+$  out of the cell.
- C.  $\text{Na}^+$  into the cell and  $\text{K}^+$  out of the cell.
- D.  $\text{Na}^+$  out of the cell and  $\text{K}^+$  into the cell.

**15- Which process do some animal cells use to enter, digest, and destroy invading bacteria?**

- A. exocytosis.
- B. pinocytosis.
- C. phagocytosis.
- D. All of the above.

**16- Which of the following statements about RNA is true?**

- A. RNA is found only in proteins.
- B. RNA is found only in the nucleus.
- C. RNA is found only in the cytoplasm.
- D. RNA is found in the nucleus and cytoplasm.

**17- Which of the following statements is false?**

- A. A wax is a lipid.
- B. Starch is a lipid.
- C. Saturated fats are solid at room temperature.
- D. Unsaturated fats are liquid at room temperature.

**18- Which of the following molecules make up the basic structure of a cell membrane?**

- A. waxes
- B. steroids
- C. fatty acids
- D. phospholipids

**19- Which process remove waste products out of the cell?**

- A. osmosis.
- B. exocytosis.
- C. facilitated diffusion.
- D. a cell membrane pump.

**20- Which of the following is not a function of polysaccharides**

- A. energy storage
- B. energy source
- C. storage of genetic information
- D. structural support

Course No: DNTS 1301  
Course Title: General Biology  
Date: 18-05-2013  
No. of Questions: (4)  
Time: 2hours  
Using Calculator (No)

University of Palestine



Final term Exam  
2012-2013  
Total Grade: 60

Instructor: Dr. Essameddin Elzatma  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: Desentry  
Dep. / Specialist: \_\_\_\_\_  
Using Dictionary (No)

**Question 2: True (T) or False (F) (10 Marks)**

- 1- A pathogen is an agent that is harmful only to plants. (T / F)
- 2- Bacterial cells have membrane-bound organelles and chromosomes. (T / F)
- 3- Linear chromosomes are found in eukaryotic cells but NOT in a bacterial cells. (T / F)
- 4- Virulent viruses reproduce by the lysogenic cycle. (T / F)
- 5- In mitosis, spindle fibers connect two sister chromatids. (T / F)
- 6- Bacteria do not have nuclei and therefore also do not have genetic material. (T / F)
- 7- The cycle of viral infection, replication, and cell destruction is called the lysogenic cycle. (T / F)
- 8- Interphase is an important stage of mitosis. (T / F)
- 9- Biologists now know that viruses consist of a protein surrounded by a nucleic acid coat. (T / F)
- 10- It is important to distinguish between Gram-positive and Gram-negative bacteria because Gram-positive bacteria never cause fatal diseases. (T / F)
- 11- Gram-negative bacteria have a thick layer of peptidoglycan that stains purple. (T / F)
- 12- The sex of the individual can be determined from a karyotype. (T / F)
- 13- Meiosis is a type of cell division that produces zygotes. (T / F)
- 14- All euokaryotic cells undergo meiosis. (T / F)
- 15- Diffusion is an active process that requires a cell to expend a great deal of energy. (T / F)
- 16- A virus is a nonliving particle made up of nucleic acid and a protein or lipoprotein coat. (T / F)
- 17- A cell placed in a strong salt solution would probably burst because of an increase in osmotic pressure. (T / F)
- 18- The major component sugar of plant cell wall is peptidoglycan. (T / F)
- 19- Meiosis results in 2 haploid daughter cells. (T / F)
- 20- Viruses are destroyed by antibiotics. (T / F)

Course No: DNTS 1301  
Course Title: General Biology  
Date: 18-05-2013  
No. of Questions: (4)  
Time: 2hours  
Using Calculator (No)

University of Palestine



Final term Exam  
2012-2013  
Total Grade: 60

Instructor: Dr. Essameddin Elzatma  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: Desentry  
Dep. / Specialist: \_\_\_\_\_  
Using Dictionary (No)

**Question 3: Fill in the Space (5 Marks)**

- 1- Active transport systems are a form of cell transport that requires energy from molecules of-----
- 2- ----- can be obtained from bacteria or fungi and used to treat pathogenic bacteria.
- 3- In mitosis, anaphase follows -----
- 4- Following replication of its DNA, each chromosome contains two chromatids, which are attached to each other by -----
- 5- When water is removed during monomers linking to form polymers, this chemical reaction is called----  
-----
- 6- Exchange of segments of DNA in meiosis is called -----
- 7- Proteins are formed from the linkage of amino acids by -----
- 8- The procedure used to distinguish between two types of bacterial cell wall structures is called -----
- 9- Spherical bacteria are called -----
- 10- HIV contains -----that enable it to convert RNA to DNA.

**Question 4: Match the correct answers (5 Marks)**

- |   |                         |
|---|-------------------------|
| 1- Secondary structure of protein.                                    | ----- prion             |
| 2- A spherical bacteria.  | ----- nitrogen fixation |
| 3- A single-celled microorganism that lacks a nucleus is              | ----- retrovirus        |
| 4- structure on some cells that is used for movement                  | ----- lytic cycle       |
| 5- An infectious particle made only of protein                        | ----- alpha helix       |
| 6- A virus that contains reverse transcriptase enzyme                 | ----- capsid            |
| 7- The outer protein coat of a virus is                               | ----- antibiotic        |
| 8- The process of destroying bacterial cells during viral replication | ----- prokaryote        |
| 9- Kill bacterial cells   | ----- flagella          |
| 10- Converting nitrogen gas into ammonia is                           | ----- cocci             |



**Course No: DNTS 1301**  
**Course Title: General Biology**  
**Date: 18-05-2013**  
**No. of Questions: (4)**  
**Time: 2hours**  
**Using Calculator (No)**

**University of Palestine**



**Final term Exam**  
**2012-2013**  
**Total Grade: 60**

**Instructor:Dr. Essameddin Elzatma**  
**Student No.:** \_\_\_\_\_  
**Student Name:** \_\_\_\_\_  
**College Name:Desentry**  
**Dep. / Specialist:** \_\_\_\_\_  
**Using Dictionary (No)**