

Cairo University

Faculty of Sciences

Department of Biophysics



Midterm Exam: November 13, 2018

Course Title: Biophysics for biotechnology

Course Code: BT Biophy 311

Instructor: Dr. Abdo Elfiky

Name: **code #:**

(Model Answer)

Choose the correct answer for the following questions:

1. biophysics researching the effects of radioactivity on the environment.
(a) Medical.
(b) Molecular.
(c) **Environmental.**
2. The part of a molecule that involved in its biological function is called
(a) Residue.
(b) **Active site.**
(c) Antagonist.
3. is the process of molecules spreading out, as a result of the random motion.
(a) Transport.
(b) **Diffusion.**
(c) Phosphorylation.
4. limit and control the movement of molecules into and out of the cell and from one region of the cell to another.
(a) **Membrane.**
(b) Protein.
(c) Ligand.
5. is a branch of biophysics that studies the physics of energy flow in living systems.
(a) Thermodynamics.
(b) Biomechanics.
(c) **Bioenergetics.**

6. are specialized cells that are able to convert energy from some outside stimulus into an electrical response.
- (a) Nerve cells.
 - (b) **Rods.**
 - (c) a and b.
7. The cell membrane is in fact , meaning that certain types of molecules can pass through the membrane, whereas others cannot.
- (a) Permeable.
 - (b) **Selectively permeable.**
 - (c) Impermeable.
8. The transmembrane proteins that assist other molecules in getting through the membrane is called
- (a) Peripheral proteins.
 - (b) Liposomes.
 - (c) **Membrane transporters.**
9. is the process in which a portion of the cell membrane folds in toward the cell. At the same time, this portion of membrane engulfs some molecule or molecules from outside the cell.
- (a) **Endocytosis.**
 - (b) Exocytosis.
 - (c) Conformational transition.
10. Binding of a specific molecule to its receptor is often a for the cell to do something. For example, increase its production of a certain enzyme.
- (a) Signal.
 - (b) Message.
 - (c) **a and b.**