

Bago University
Department of Botany
Second Semester Examination, September, 2019

Fourth Year (B.Sc)
Botany Specialization
Answer All Questions

Bot-4112
Introduction to Evolution
Time allowed: (3) Hours

I. Determine whether each statement is TRUE or FALSE.

(10 marks)

1. Life may have evolved from inanimate matter.
2. A genetic system is the sufficient, condition of organism.
3. As the temperature decreased the surface of the magma ocean solidified.
4. Urey suggested that the earth's primitive atmosphere was composed of toxic gases.
5. Earth was bombarded by huge profile of rock.
6. Ions is oxidized and deposited on the flank of plates.
7. Polymers can be linked to produce macromolecules, which are also called proteins.
8. Lipids are perfectly suited to form cell membranes.
9. Glycolysis provided the energy by converting organic ATP.
10. DNA too over as the primary genetic information..

II. Write correct word to complete the following sentences.

(10 marks)

1. As the bombardment from other planets slowed down, ----- dropped.
2. The surface of clays have positive charges to attract ----- molecules.
3. The salt content of the ----- oceans had nearly twice that day.
4. Amino acids are the basic building blocks of -----.
5. The discovery that RNA can act as an ----- to assemble new RNA molecules.
6. The origin of life is that RNA is capable of catalyzing its own -----.
7. The first photosynthetic ----- utilized H₂S convert CO₂ to organic molecules.
8. Early fossils mark a major event in the ----- of life.
9. An archaebacterial cell is commonly supposed to have several as the ----- cell.
10. The nucleus was formed to provide perfect ----- mechanisms.

III. Answer all questions.

(10 marks)

1. Describe the clay surface of early earth.
2. Define Planetesimals.
3. What is volatiles in today's atmosphere gases?
4. Clarify the other prebiotic compounds in polymerization reactions.
5. Give three stages in generation of ATP.

IV. Answer all questions.

(20 marks)

1. Enumerate the any three points of chemical and physical processes of life origin.
2. Briefly explain the abiotic source of methane.
3. Explain the emergence of ozone layer.
4. Describe three line of evidence in hydrogenosomes and mitochondria.

V. Answer any three questions.

(30 marks)

1. List place of life origin and explain any three.
2. Discuss Earths atmosphere and favorable condition for life.
3. Describe the formation of cell's compartment with diagram.
4. Give fully labeled diagram of membrane coated RNA to bacteria.
5. Explain the Origin of the Nucleus and ER with illustration.