

Bago University
Department of Botany
First Semester Examination, March, 2019

Forth Year
Botany Specialization
Answer All Questions

Bot.4104
Biochemistry
Time allowed: (3) Hours

I. Determine whether each statement is TRUE or FALSE.

(10 marks)

1. The word saccharide comes from the latin work Sakkharon meaning sugar.
2. If the carbonyl group is an aldehyde, the monosaccharide is an aldose.
3. Many bacteria use organic compounds as hydrogen acceptors.
4. About 50% of the seed dry weight of jojoba consists of a liquid wax.
5. Butter becomes rancid more easily in summer.
6. Sodium glutamate is a valuable flavoring agent.
7. Meat, eggs and fish are sources of complete protein.
8. DNA consists of two long polymers of simple units called nucleoside.
9. Maltase catalyses the hydrolysis β - glycosides.
10. Phosphate are well-known high-energy molecule.

II. Write correct word to complete the following sentences.

(10 marks)

1. Monosaccharide can not be hydrolyzed to smaller -----.
2. Waxes are not easily hydrolysed like fats or digested by -----.
3. Phospholipase A is present in large amounts in snake venom and human -----.
4. Amino acid are white ----- substance.
5. Cells are capable of synthesizing new -----.
6. Polypeptide chains run in opposite direction known as ----- β pleated sheet structure.
7. Prolamins are soluble in 70-80% aqueous -----.
8. Adenine bonded to ribose forms the ----- adenosine.
9. The DNA segments carrying the genetic information are called -----.
10. Coenzyme is nicotinamide adenine -----.

III. Answer all questions.

(10 marks)

1. Define molecular biology.
2. State the significance of pentose phosphate pathway.
3. What is compound lipid?
4. Write short notes on nucleosides.
5. Name the three kinds of RNA.

IV. Answer all questions.

(20 marks)

1. Tabulate the monosaccharide classifications based on the number of carbons.
2. Mention the energy transduction process in biological system.
3. How do you understand the carotenoid?
4. Describe the quaternary structure of protein.

V. Answer any three questions.

(30 marks)

1. Give an explanation of TCA cycle.
2. Write complete account on the plant fatty acid.
3. Explain about the energetic of β oxidation.
4. Describe the simple proteins.
5. Enumerate the six major classes of IUB system and explain them.