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0807M033

Candidate's Seat No : _____

B.Sc. Sem-I Examination

CC 3 Paper-101

Bio Chemistry

July 2021

Time : 2-00 Hours]

[Max. Marks : 50

Instruction : All Questions in **Section I** carry equal marks

Attempt any THREE questions in Section I

Questions IX in **Section II** is **Compulsory**

- Q.I A Explain the scope and application of Biochemistry 12
B. Define the mutation and biochemistry 2
- Q.II A. Write a note on Chemical Evolution 7
b. Describe the RNA world 7
- Q.III A. Describe step down reaction of carbohydrate 5
B. Explain Molish test, Iodine test and Phenyl hydrazine test for carbohydrates 9
- Q.IV A Explain Lobry de Bruyn-von Ekenstein reaction and define Anomer and Epimer 7
B Draw the structure of 1. L glucose 2. α -D Mannose 5
3. β -L Galactose 4. D-Fructose 5. Xylulose
- Q.V A. Write the structure of following and one letter and three letter abbreviation 7
1. Glycine 2. Aspartic acid 3. Tyrosine 4. Alanine 5. Valine 6. Serine 7. Proline
B. Write a note on Essential amino acid Vs Non Essential Amino acid and Decarboxylation reaction of amino acid 7

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- Q.VI A Explain non-protein amino acids 7
- B. Discuss oxidative deamination of amino acid by Ninhydrin reagent and write its importances 7
- Q.VII A. Write the structure of following: 6
1. Stearic acid 2. Behnic acid 3. Olein 4. Palmitic acid 5. Oleic acid 6. Linolenic acid
- B. Discuss in detail on Rancidity of fats 8
- Q.VIII A. Discuss the Hydrogenation and Halogenation reaction of fatty acid 7
- B. Write a note Waxes 7

SECTION II

Answer (any 8) of the following 8

- First experiment regarding evolution of life was performed by
 - Waston and Crick
 - Oparin and Haldane
 - Urey and Miller
 - Meselon and Stahl
- Copying of parental DNA to form daughter DNA molecule is called ____
 - Reverse Transcription
 - Transcription
 - Replication
 - Translation
- _____ studys to understand gene mutation and chromosomal aberration.
 - Agriculture
 - Immunology
 - Veterinary Science
 - Genetics
- Formation of earth takes place around _____ years ago.
 - 1-2 billion
 - 1-2 million
 - 4-6 billion
 - 10 – 15 billion
- Which of the following is an example of Epimer?
 - Glucose and Galactose
 - Glucose and Ribose
 - Galactose, Mannose and Glucose
 - Glucose, Ribose and Mannose.
- Sucrose is a ____
 - Monosaccharide
 - disaccharide
 - polysaccharide
 - triose

M33-3

7. Which of the following is a reducing sugar
- a. erythulose b. dihydroxyacetone c. Glucose d. none of these
8. Carbohydrates are also known as _____
- a. Carbonates b. Hydrates of carbon c, Glycolipid d. Polysaccharides
9. Which among the following is a non-essential amino acids
- a. Threonine b. Lysine c. Histidine d. Serine
10. Identify the amino acids containing nonpolar, aliphatic R groups .
- a. Glycine, alanine, leucine
- b. Phenylalanine, tyrosine , tryptophan
- c. Lysine, arginine, histidine
- d. Serine, thronine, cysteine
11. Which of the amino acid is not optically active?
- a. Cysteine b. Lysine c. Arginine d. Glycine
12. In which amino acid Imidazole group , an aromatic ring found?
- a. Lysine b. Arginine c. Histidine d. Glutamate
13. 1 gram of fat provides _____ kcal .
- a. 6 b. 9 c. 12 d. 15
14. Which of the following is a cyclic fatty acid?
- a. Cerebronic acid b. Ricinoleic acid c. Chaulmoogric acid d. Oleic acid
15. _____ is a not an essential fatty acid
- a. Linoleic acid b. Linolenic acid c. Arachidonic acid d. All of these
16. Fatty acid are the long linear hydrocarbon chain with a _____ group at one end.
- a. aldehyde b. Ketone c. Carboxylic d. amino