QPC: RF21BSCAG069

Reg. No.										

AR - 21

GIET UNIVERSITY, GUNUPUR – 765022

B. Sc. (Ag.) (Third Semester) Examinations, February – 2023

AC- 213- Fundamentals of Plant Biochemistry

Time: 2 hrs | Maximum : 50 Marks

The figures in the right hand margin indicate marks.

PART – A

Q.1. Fill in the blanks with suitable word / figure. **(0.5 x 10 = 5 Marks)**

a. Carbohydrates are also known as hydrates of _____.
b. Glyceraldehyde is an _____ sugar.
c. Protein discovered by ----------.
d. A nucleoside is formed from Sugar and N-base with _____ bond.
e. In a dipeptide _____ number of peptide bonds are present.
f. _____ DNA is having a left-handed orientation of its helix.
g. _____ is composed of nucleoside and phosphoric acid.
h. Most important biomolecule on earth is _____.
i. Protein discovered by ----------.
j. Triglyceride is otherwise known as_____.

Q. 2. Define (or) Explain the following in one or two sentences. **(1 x 5 = 5 Marks)**

a. Iodine value
b. Enantiomer
c. Unsaturated Fatty Acid
d. Oxidoreductases
e. Isoelectric point

Q3. Match the following **(0.5 x 10 = 5 Marks)**

Column – A			**Column – B**	
(a)	Acetyl CoA		(i)	Mirror image
(b)	Cyclic		(ii)	3C
(c)	Glyceraldehyde		(iii)	4C
(d)	Erythrose		(iv)	Haworth projection
(e)	Ribose		(v)	7C
(f)	Open chain		(vi)	2C
(g)	Sedoheptulose		(vii)	5C
(h)	Enantoimer		(viii)	Fischer projection
(i)	Glycogenesis		(ix)	Hans Krebs
(j)	TCA Cycle		(x)	Carbohydrate metabolism

Q4. Write True or False against each statement **(0.5 x 10 = 5 Marks)**

a. Fats are main sources of energy.
b. Glyceraldehyde is an example of aldose sugar.
c. Pyranose is a five membered ring structure.
d. RNA is known as universal currency of energy.
e. DNA has a clover leaf structure.
f. Pyranose are 6 membered ring structure.
g. Gramicidin is produced from *Bacillus brevis*.
h. Phospholipid is a structural lipid.
i. Tryptophan is non polar aromatic amino acid.
j. Glycolysis is a catabolic process.

PART – B

Attempt *ANY FIVE* questions. All question carries equal marks **(6 x 5 = 30 Marks)**

5. Briefly classify carbohydrates with suitable examples.
6. What is a peptide bond? Classify of peptides with suitable examples. Enlist various functions of peptides.
7. What is Lipid? Write the function & classification of lipid.
8. Briefly explain the classification of enzyme.
9. What is Nucleic acid? Elaborate the process of nucleic acid formation.
10. Ellaborate TCA cycle with suitable diagram.

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