

Time : 1 hour 15 Minute

STD 11 Science Biology
Chapter Based Test

Total Marks : 40

SECTION A

* Choose The Right Answer From The Given Options.[1 Marks Each] [5]

- In chloroplasts, chlorophyll is present in the.
(A) Outer membrane. (B) Inner membrane.
(C) Thylakoids. (D) Stroma.
- Organelle/organoid involved in genetic engineering is:
(A) Plasmid. (B) Mitochondrion.
(C) Golgi apparatus. (D) Lomasome.
- Amino acids are also known as:
(A) α -amino acid.
(B) β -amino acid.
(C) γ -amino acid.
(D) δ -amino acid.
- The fact that all biomolecules undergo turnover is known as:
(A) Catabolism. (B) Anabolism.
(C) Metabolism. (D) All of the above.
- Which of the following is not a pyrimidine?
(A) Uracil (B) Cytosine (C) Guanine (D) Thymine

* Answer The Following Questions In One Sentence.[1 Marks Each] [6]

- What is cell theory?
- Which cell organelle is also called power house of the cell?
 - How are these cell organelles reproduced?
- What is a polysome? What is its function?
- What is the function of carbonic anhydrase?
 - How many times does carbonic anhydrase accelerate the reaction?
- Give one example each of.
 - An acidic amino acid.
 - A basic amino acid.
- Define metabolism.

SECTION B

* Given Section consists of questions of 2 marks each. [10]

1. What is a mesosome in a prokaryotic cell? Mention the functions that it performs.
2. Attempt titrating an amino acid against a weak base and discover the number of dissociating (ionizable) functional groups in the amino acid.
3. Starch, cellulose, glycogen, chitin are polysaccharides. From the options below, choose the one appropriate and write against each.
 - Cotton fibre _____.
 - Exoskeleton of cockroach _____.
 - Liver _____.
 - Peeled potato _____.
4. About the structure of DNA molecule, answer the following questions:
 - i. How many hydrogen bonds are formed between.
 - a. Guanine and Cytosine,
 - b. Adenine and Thymine?
 - ii. How many base pairs are present in one twin of the helix of a DNA strand?
 - iii. What is the distance between two successive bases in a DNA strand?
5. What is the difference between primary and secondary metabolites?

SECTION C

* Given Section consists of questions of 3 marks each.

[9]

1. Discuss briefly the role of nucleolus in the cells actively involved in protein synthesis.
2. Draw a well-labelled diagram of a typical chloroplast.
3. What are proteins? How are proteins formed? Describe the primary, secondary and tertiary structures of proteins.

OR

How are proteins formed? Describe the primary, secondary and tertiary structures of proteins.

SECTION E

* Given Section consists of questions of 5 marks each.

[10]

1. The genomic content of the nucleus is constant for a given species where as the extra chromosomal DNA is found to be variable among the members of a population. Explain.
2. Describe the important properties of enzymes.

॥ ज्ञानं एव श्रमस्य पुंजः ॥