BIOLOGY

BOOKS - NCERT BIOLOGY (HINGLISH)

BIOMOLECULES

Mcqs

1. It is said that elemental composition of living organisms and that of inanimate objects (like earth's crust) are similar in the sense

that all the major elements are present in both. Then what would be the difference between these two groups ?

Choose a correct answer from the following.

A. Living organisms have more gold in them than inanimate objects

B. Living organisms have more water in their body than inanimate objects

C. Living organisms have more carbon, oxygen and hydrogen per unit mass than inanimate objects

D. Living organisms have more calcium in them than inanimate objects

Answer: C

 Watch Video Solution

2. Many elements are found in living organisms either free or in the form of compounds. One of the following is not found in living organisms.

A. Silicon

B. Magnesium

C. Iron

D. Sodium

Answer: A

Watch Video Solution

3. Amino acids have both an amino group and a carboxy group in their structure. Which amongst the following is an amino acid ?

A. Formic acid

B. Glycerol

C. Glyolic acid

D. Glycine

Answer: D

 Watch Video Solution

4. An amino acid under certain conditions have both positive and negative charges

simultaneously in the same molecule. Such a form of amino acid is called

A. acidic form

B. basic form

C. aromatic form

D. zwitterionic form

Answer: D

 Watch Video Solution

5. Which of the following sugars have the same number of carbon as present in glucose ?

A. Fructose

B. Erythrose

C. Ribulose

D. Ribose

Answer: A

Watch Video Solution

6. An acid soluble compound formed by phyosphorylation of nucleoside is called

A. nitrogen base

B. adenine

C. sugar phosphate

D. nucleotide

Answer: D

 Watch Video Solution

7. When we homogenise any tissue in an acid the acid soluble pool represents

A. cytoplasm

B. cell membrane

C. nucleus

D. mitochondria

Answer: A

Watch Video Solution

8. The most abundant chemical in living organisms could be

A. protein

B. water

C. sugar

D. nucleic acid

Answer: B

 Watch Video Solution

9. A homopolymer has only one type of building block called monomer repeated 'n' number of times. A heteropolymer has more than one type of monomer. Proteins are heteropolymers usually made of

A. 20 types of monomers

B. 40 types of monomers

C. 30 types of monomers

D. only one type of monomer

Answer: A

Watch Video Solution

10. Proteins perform many physiological functions. For example, some functions as enzymes. One of the following represents an additional function that some proteins discharge

A. Antibiotics

B. Pigment conferring colour to skin

C. Pigments making colours of flowers

D. Hormones

Answer: D

 Watch Video Solution

11. Glycogen is a homonpolymer made up of

A. glucose units

B. galactose units

C. ribose units

D. amino acids

Answer: A

Watch Video Solution

12. The number of 'ends' in a glycogen molecule would be

A. Equal to the number of branches plus one

B. Equal to the number of branch points

C. One

D. Two, one on the left side and another on the right side

Answer: A

 Watch Video Solution

13. The primary structure of a protein molecule has

A. two ends

B. one end

C. three ends

D. no ends

Answer: A

Watch Video Solution

14. Which of the following reactions is not enzyme-mediated in biological system ?

A. Dissolving CO_2 in water

B. Unwinding the two strands of DNA

C. Hydrolysis of sucrose

D. Formation of peptide bond

Answer: A

Watch Video Solution

Very Short Answer Type Questions

1. Medicines are either man made (i.e., synthetic) or obtained from living organisms like plants, bacteria, animals, etc., and hence, the latter are called natural products. Sometimes, natural products are chemically altered by man to reduce toxicity or side

effects. Write against each of the following whether they were initially obtained as a natural product or as a synthetic chemical.

A. Penicillin

B. Sulphonamide

C. Vitamin-C

D. Growth hormone

Answer:

 Watch Video Solution

2. Select an appropriate chemical bond among ester bond, glycosidic bond, peptide bond and hydrogen bond and write against each of the following.

A. Polysaccharide

B. Protein

C. Fat

D. Water

Answer:

 Watch Video Solution

3. Write the name of any one amino acid, sugar, nucleotide and fatty acid.

Watch Video Solution

4. Reaction given below is catalysed by oxidorecductase between two substrates A and A' complete the reaction.

A reduced + A' oxidised $\rightarrow$

Watch Video Solution

5. How are prosthetic groups different from co-factors?

Watch Video Solution

6. Glycine and alanine are different with respect to one substituent on the α-carbon. What are the other common substituent groups ?

Watch Video Solution

7. Starch, cellulose, glycogen, chitin are polysaccharides found among the following. Choose the one appropriate and write against each.

Cotton fibre .....

Exooskeleton of cockroach .....

Liver .....

Peeled potato .....

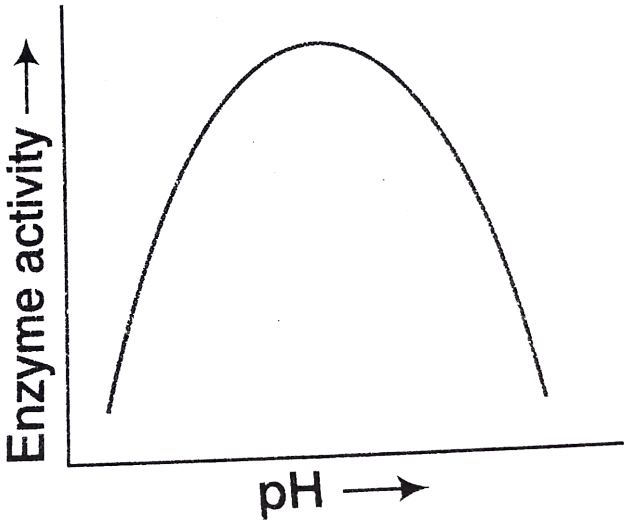
Watch Video Solution

Short Answer Type Questions

1. Enzymes are proteins, Proteins are long chains of amino acids linked to each other by peptide bonds. Amino acids have many functional groups in their structure.

These functional groups are many of them at least, ionisable. As they are weak acids and bases in chemical nature, this ionisatio is infuluenced by pH of the solution. For many enzymes, activity is influenced by surrounding pH. This is depicted in the curve below, explain

briefly.



Watch Video Solution

2. Is rubber a primary metabolite or a secondary metabolite? Write four sentences about rubber.

Watch Video Solution

3. Schematically represent primary, secondary and tertiary structures of a hypothetical polymer say for example a protein.

Watch Video Solution

4. Nucleic acids exhibit secondary structure, justify with example.

Watch Video Solution

5. Comment on the statement 'living state is a non-equilibrium steady state to be able to perform work :

Watch Video Solution

Long Answer Type Questions

1. Formation of Enzyme substrate complex (ES) is the first step in the caalysed reactions.

Describe the other steps till the formation of product.

Watch Video Solution

2. What are different classes of enzymes? Explain any two with the type of reactions they catalyse.

Watch Video Solution

3. Nucleic acid exhibit secondary structure. Describe through Watson-Crick model.

Watch Video Solution

4. What is the difference between a nucleotide and nucleoside ? Give two examples of each with their structure.

Watch Video Solution

5. Describe various forms of lipid with a few examples.

View Text Solution