

5. Identify the heteropolymer from the following

- (a) Cellulose (b) Inulin
(c) Starch (d) Chitin

(Ans. d)

2 MARKS QUESTIONS

1. How does temperature affect an enzyme catalyzed reaction?

(Hints: Mention about optimum temperature, high temperature – denaturation of proteins)

2. What is the difference between nucleotide and nucleoside? Give one example of each.

(Hints: Mention the difference in the chemical components, examples for each)

3. What are nucleotides? Describe their structure.

(Hints: Mention the three chemical components, explain the bond)

4. What is holoenzyme?

(Hints: Apoenzyme and co factor)

5. In how many groups does polysaccharides classified?

(Hints: Mention about homopolysaccharides and heteropolysaccharides)

6. How do proteins act as carrier proteins?

(Hints: Helps in the transport of substances to cross plasma membrane)

7. Why ATP is known as the energy currency of the cell?

(Hints: Energy is stored in the form of ATP and when needed can liberate energy by the breakdown of the bond)

3 MARKS QUESTIONS

8. What is competitive inhibition of enzyme? How is it different from non-competitive inhibition?

(Hints: Nature of competitive inhibitor – structurally similar to substrate, binding to active site, non-competitive inhibitor – dissimilar, binds a site other than active site)

9. Mention any three differences between DNA and RNA.

(Hints: Mention the differences in sugar – ribose and deoxyribose, nitrogen base – thymine in DNA and uracil in RNA, RNA –single stranded and DNA – double stranded)

10. Differentiate between anabolic and catabolic pathways. How are the pathways regulated?

(Hints: Definition of anabolism and catabolism, energy release or utilization, regulation by enzymes)

11. What are co-enzymes? How do nucleotides form co-enzymes?

(Hints: Type of co-factor, non-protein part, examples)

12. Explain the different types of proteins.

(Hints: Explain about primary, secondary, tertiary and quaternary structures)

13. What is the importance of secondary metabolites?

(Hints: Mention about secondary metabolites, examples and their economic importance)

5 Marks questions

14. Describe the structure of DNA as proposed by Watson and Crick.

(Hints: Mention about nitrogen base, sugar and phosphate group, nucleoside and nucleotide formation, nature of bonds, number of base pairs, length of DNA, antiparallel, complementary nature)

15. Give a description about the nature and types of bonds present in biomolecules

(Hints: mention the nature of bonds in proteins, polysaccharides and nucleic acids)

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