

# DPP

DAILY PRACTICE PROBLEMS

Class : XI<sup>th</sup>  
Date :

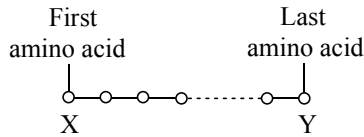
Subject : BIOLOGY  
DPP No. : 4

## Topic :- Biomolecules

- Mannitol is  
a) Amino acid                      b) Amino alcohol                      c) Sugar alcohol                      d) Sugar acid
- Almost all enzymes are ... in nature  
a) Lipids                              b) Proteins                              c) Carbohydrates                      d) Nucleic Acid
- One of the secondary structures exhibited by DNA is.....  
a) Stehenson's model    b) Watson-Crick model    c) Bohr's model                      d) Wilkenson model
- Feedback inhibition of enzymes is affected by which of the following?  
a) Enzyme                              b) Substrate  
c) End products                      d) Intermediate end products
- All the chemical reactions occurring in living organisms are called  
a) Metabolism                      b) Anabolism                      c) Catabolism                      d) Enzymatic
- Given below are two statements A and B. Choose the correct answer related to the statements.  
**Statement A** Amino acids are amphoteric in their function.  
**Statement B** All amino acids are necessary for our body.  
a) Statement A is correct but statement B is wrong  
b) Both the statements A and B are correct  
c) Statement A is wrong but statement B is correct  
d) Both the statements A and B are wrong
- The tertiary structure of the proteins containing amino acid cysteine is achieved through  
a) Hydrogen bonds                      b) Disulphide bonds  
c) Van der Waal's force                      d) Ionic bonds
- Maltose gives rise to two molecules of  
a) Fructose                              b) Lactose                              c) Glucose                              d) Sucrose

9. One of the following is a simple protein.  
a) Nucleoprotein      b) Glycoprotein      c) Lipoprotein      d) Albumin

10. Identify X and Y in the given protein structure



- a) X-N-terminal amino acid, Y-C-terminal amino acid  
b) X-N-terminal amino acid, Y-N-terminal amino acid  
c) X-C-terminal amino acid, Y-N-terminal amino acid  
d) X-C-terminal amino acid, Y-C-terminal amino acid
11. Which of the following statements are correct?  
I. Relative abundance of carbon and hydrogen with respect to other elements is higher in any living organisms  
II. Living organisms have more nitrogen and oxygen per unit mass than inanimate objects (*e.g.*, earth crust)  
III. All the elements present in a sample of earth's crust are also present in a sample of living tissue  
IV. Living organisms have more Ca, Mg, Na in them than inanimate object  
a) All of these      b) All except IV      c) Only IV      d) None of these
12. Which one is diaminodicarboxylic amino acid?  
a) Cystine      b) Lysine      c) Cysteine      d) Aspartic acid
13. Which of the following statements about enzymes are correct?  
I. Enzymes do not alter the overall change in free energy for a reaction  
II. Enzymes are highly specific for reactions  
III. The energy input needed to start a chemical reaction is called activation energy  
IV. Enzymes are proteins whose three dimensional shape is key to their functions  
a) I and V      b) I, II and V      c) II and V      d) All of these
14. Which amino acid is denoted by symbol 'F'?  
a) Phenylalanine      b) Proline  
c) Tryptophan      d) Methionine
15. Which enzyme catalyse the break down of hydrogen peroxide to water and oxygen?  
a) A carbonic anhydrase and catalase      b) Hydrolyase and oxidase  
c) Peroxidase and catalase      d) Hydrolase and oxidase

16. Sugar and amino acids are
- a) Primary metabolites
  - b) Secondary metabolites
  - c) Feedback
  - d) Inoculum
17. Which of the following statements regarding enzyme inhibition is correct?
- a) Non-competitive inhibition of an enzyme can be overcome by adding large amount of substrate
  - b) Competitive inhibition is seen when a substrate competes with an enzyme for binding to an inhibition protein
  - c) Competitive inhibition is seen when the substrate and the inhibitor compete
  - d) Non-competitive inhibitors often bind to the enzyme irreversibly
18. Enzymes are functional at
- a) 10-15°C
  - b) 15-25°C
  - c) 25-30°C
  - d) 30-50°C
19. Cellulose is made up of
- a) Branched chain of glucose molecule linked by  $\alpha - 1, 4$  glycosidic bond in straight chain and  $\beta - 1, 6$  glycosidic bond at the site of branching
  - b) Branched chain of glucose molecule linked by  $\alpha - 1, 6$  glycosidic bond in straight chain and  $\beta - 1, 4$  glycosidic bond at the site of branching
  - c) Unbranched chain of glucose molecule linked by  $\beta - 1, 4$  glycosidic bond
  - d) Unbranched chain of glucose molecule linked by  $\alpha - 1, 6$  glycosidic bond
20. Which of the following statements is wrong?
- a) Sucrose is a disaccharide
  - b) Cellulose is a polysaccharide
  - c) Glycine is a sulphur containing amino acid
  - d) Uracil is a pyrimidine