DPP
DAILY PRACTICE PROBLEMS

Class : XIth **Subject : BIOLOGY**
Date : **DPP No. : 8**

Topic :- Biomolecules

1. The physical and the chemical compositions of amino acids are essentially of the
   a) Only the carboxyl group
   b) Only the *R*-functional group
   c) Amino, carboxyl and *R* groups
   d) Only amino group

2. The proteinaceous molecule that joins a non-proteinaceous prosthetic group to form a functional enzyme is called
   a) Co-factor
   b) Apoenzyme
   c) Holoenzyme
   d) Isoenzyme

3. Select the correct constituents of protein
   a) Carbon, hydrogen, oxygen and nitrogen
   b) Carbon, hydrogen, nitrogen and sulphur
   c) Carbon, hydrogen, nitrogen, oxygen and sulphur
   d) Carbon, hydrogen and oxygen

4. The β-pleated sheet structure found in proteins is due to
   a) Linking together of two or more polypeptides
   b) Coiling of polypeptide chains
   c) Formation of peptide bonds
   d) Folding of the coiled polypeptide chains

5. Enzymes, vitamins and hormones can be classified into a single category of biological chemicals, because all of these
   a) Enhance oxidative metabolism
   b) Are conjugated proteins
   c) Are exclusively synthesized in the body of a living organism as at present
   d) Help in regulating metabolism

6. Paraffin wax is
   a) Ester
   b) Acid
   c) Monohydric alcohol
   d) Cholesterol

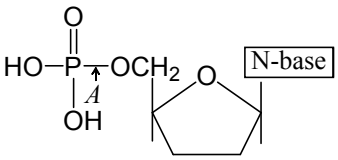
7. Many physiological functions are performed by proteins. One such function involves that some proteins discharge
   a) Antibiotics
   b) Hormones
   c) Pigment making colours of flowers
   d) Pigment conferring colour to skin

8. One full turn of the helical strand involves … steps
   a) 20 b) 15 c) 34 d) 10

9. One strand of DNA has sequence of nucleotide 3' ATTCGCTAT 5' then other strand of DNA has
   a) 3' TAAGCGATA 5' b) 5' TAGCACGTA 5' c) 5' TAGCACGTA 3' d) 5' TAAGCGATA 3'

10. In a protein molecule, the amino acid units are linked together by …..... bonds formed between the amino acid units and the carboxyl group of successive amino acids
    a) Peptide b) Hydrogen c) Covalent d) Ionic

11. A in the given structure represents



    a) Ester bond b) Ionic bond
    c) Phosphate bond d) Glycosidic bond

12. Identify wheather the given statements are true or false
    I. A protozoan contains thousand of organic compounds
    II. Concentration of biomolecules in an organism is not fixed
    a) I-True; II-True b) I-False; II-False c) I-True; II-False d) I-False; II-True

13. Michaelis Menten constant (km) is equal to
    a) The rate of enzymatic activity
    b) The rate of reaction
    c) Substrate concentration at which the reaction attains half of its maximum velocity
    d) Substrate concentration at which the rate of reaction is maximum

14. Which one of the following amino acids was not found to be synthesized in Miller's experiement?
    a) Glycine b) Aspartic acid c) Glutamic acid d) Alanine

15. Which of the following amino acids is not optically active?
    a) Glycine b) Valine c) Leucine d) Isoleucine

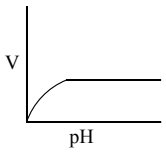
16. What provides roughage (fibre) in our diet?
    a) Cellulose b) Sucrose c) Maltose d) Collagen

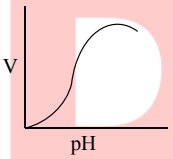
17. Starch can be used as an indicator for the detection of traces of
    a) Glucose in aqueous solution b) Proteins in blood
    c) Iodine in aqueous solution d) All of the above

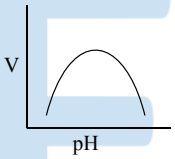
18. Pick the odd statement out
    a) Removal of CO_2 from amino acids converts an amino acid into an amine
    b) All the biomolecules have a turnover
    c) Metabolic pathway are termed as transformation reactions
    d) Metabolic pathways always follows a linear route

19. Which one is the sweetest sugar?
    a) Glucose b) Fructose c) Sucrose d) Maltose

20. Choose the correct graph showing, the effect of pH on the velocity of a typical enzymatic reaction (V)?

a) 

b) 

c) 

d)