# GOVERNMENT ZIRTIRI RESIDENTIAL SCIENCE COLLEGE

**Subject : Home Science**
**Paper Name : Biochemistry**
**Paper Number : HS/II/CC/09**
**Semester : 2nd Semester**

A : Multiple choice 1x25 = 25

1. The term Biochemistry was coined by Neuberg in
   a) 1906 ( ) b) 1903 ( )
   c) 1914 ( ) d) 1904 ( )

2. Starch is an example of
   a) Monosaccharide ( ) b) Disaccharide ( )
   c) Polysaccharide ( ) d) Pentasaccharide ( )

3. Sucrose is made up of
   a) Glucose and galactose ( ) b) Glucose and Fructose ( )
   c) Glucose and Trehalose ( ) d) None of the above ( )

4. Glucose is a/an
   a) aldose sugar ( ) b) ketose sugar ( )
   c) both (a) and (b) ( ) d) None of the above ( )

5. The most abundant monosaccharide in nature is
   a) D-glucose ( ) b) L- glucose ( )
   c) D- fructose ( ) d) D-ribose ( )

6. The melting point of fatty acid is influenced by
   a) chain length ( ) b) degree of unsaturation ( )
   c) both of the above ( ) d) none of the above ( )

7. Fatty acids with many double bonds are known as
   a) saturated ( ) b) unsaturated ( )
   c) polysaturated ( ) d) polysaturated ( )

8. Which one mostly form the lipid bilayer of cell membranes ?
   a) glycolipids ( ) b) lipolipids ( )
   c) phospholipids ( ) d) None of the above ( )

9. Which of the following is an essential fatty acid ?
   a) palmitic acid ( ) b) stearic acid ( )
   c) triglyceride ( ) d) arachidonic acid ( )

10. Linoleic acid is an example of
    a) phospholipid ( ) b) amino acid ( )
    c) unsaturated fatty acid ( ) d) saturated fatty acid ( )

contd /2..

11. Which of the following is essential amino acid ?
    a) Lysine ( ) b) Alanine ( )
    c) Cysteine ( ) d) Tyrosine ( )

12. The amino acid which containes sulphur atom is
    a) methionine ( ) b) cysteine ( )
    c) both of the above ( ) d) none of the above ( )

13. Most of the amino acids exist in biological system as
    a) L-form ( ) b) D-form ( )
    c) both ( a) and( b) ( ) d) none of the above( )

14. The bond which links amino acids is known as
    a) glycosidic bond ( ) b) peptide bond ( )
    c) covalent bond ( ) d) phosphodiester bond ( )

15. Tryptophan is an example of
    a) neutral amino acid ( ) b) acidic amino acid ( )
    c) aromatic amino acid ( ) d) basic amino acid ( )

16. Which one does not influence enzyme activity ?
    a) pH ( ) b) temperature ( )
    c) pressure ( ) d) strong acid ( )

17. Enzyme enhance the rate of biological reactions by
    a) lowering the activation energy ( ) b) getting used up ( )
    c) changing equilibrium point of reaction ( )
    d) None of the above ( )

18. The word enzyme which means in yeast was coined by
    a) Louis Pasteur ( ) b) Hans Kreb ( )
    c) JD Watson ( ) d) Kuhne ( )

19. Most of the enzymes are destroyed or made inactive by temperature above
    a) 55 degree celcius ( ) b) 60 degree celcius ( )
    c) 65 degree celcius ( ) d) 70 degree celcius ( )

20. Dehydrogenase is an example of
    a) hydrolase enzyme ( ) b) transferase enzyme ( )
    c) oxido-reductase enzyme ( ) d) isomerase enzyme ( )

contd/3

21. DNA was discovered in 1869 by
    a) Miescher ( ) b) Hans Kreb ( )
    c) JD Watson ( ) d) Lipmann ( )

22. The following nitrogen base is absent in DNA
    a) thiamine ( ) b) guanine ( )
    c) uracil ( ) d) cytosine ( )

23. Krebs cycle takes place in the
    a) nucleus ( ) b) mitochondria ( )
    c) cytosol ( ) d) golgi body ( )

24. Initial substrate for Krebs cycle is
    a) œ-ketoglutaric acid ( ) b) Pyruvic acid ( )
    c) Lactic acid ( ) d) Succinic acid ( )

25. DNA is a polymer of
    a) nucleoside ( ) b) nucleotide ( )
    c) acetyl CoA ( ) d) alcohol ( )

**B : Fill up the blank : (1x15 = 15)**

1. The linkage between two monosaccharide units is called _____.
2. Starch gives _____ colour in iodine test.
3. Cellulose is a polymer of _____.
4. Three fatty acids links with glycerol to form _____.
5. _____ is the ill-smelling of fat.
6. One gram of lipid is estimated to yield _____ kilocalories of heat.
7. The amino acids which are synthesized by the body are known as _____ amino acid.
8. Haemoglobin is an example of _____ structure of protein.
9. Amino acids at neutral pH exist as _____ ions.
10. Protein splitting enzymes are collectively known as _____ enzyme.

Contd/4

11. _____ is the actual place of catalysis on the enzyme molecule.

12. The apoenzyme and coenzyme constitute an active enzyme known as _____.

13. Double helical structure of DNA was discovered by _____.

14. Process of making glucose from non-carbohydrate sources is known as _____.

15. The linkage between two nucleotides is known as _____.

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**Keys to answer**:

**A: Multiple choice:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. | (b) | 2. | (c) | 3. | (b) | 4. | (a) |
| 5. | (a) | 6. | (b) | 7. | (b) | 8 | (c) |
| 9. | (d) | 10 | © | 11 | (a) | 12 | (b) |
| 13 | (a) | 14 | (b) | 15 | (d) | 16 | (c) |
| 17 | (a) | 18 | (d) | 19 | (c) | 20 | (c) |
| 21 | (a) | 22 | (c) | 23 | (b) | 24 | (b) |
| 25 | (b) | | | | | | |

**B: Fill up**:

| | | | | | |
|---|---|---|---|---|---|
| 1. | Glycosidic bond | 2. | Blue | 3. | Monosaccharide |
| 4. | triglyceride | 5. | Rancidity | 6. | 93 |
| 7. | non-essential | 8. | Tertiary | 9. | Negative |
| 10. | proteolytic | 11. | Active site | 12. | Holoenzyme |
| 13. | Watson & Crick | 14. | Gluconeogenesis | 15. | Phosphodiester bond |

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