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Department of Chemistry &
B.Sc. II Biochemistry
Biomolecules (Paper-I)
Question Bank

Q.1) Select correct answer from the given alternative.

1)…….. metal is present in myoglobin

i) Fe ii) Zn

iii) Mn iv) Co

2)……. Is example of phospholipid.

i) Ketone bodies ii) Cholesterol

iii) Lecithin iv) Triglyceride

3)……. Is a monomer of starch.

i) Fructose ii) Galactose

iii) Glucose iv) Sucrose

4)……. Number of amino acids are present in oxytocin.

i) Nine ii) Seven

iii) Eight iv) five

5)……. Symbol represent amino acid arginine by IUPAC nomenclature.

i) A ii) R

iii) N iv) G

6)Which of the following is a non- reducing disaccharide……..

i) Sucrose ii) Glucose

iii) Fructose iv) Lactose

7)Proteins are the polymers of …….

i) Amino acids ii) lipids

iii) Phospholipid iv) Carbohydrate

8)The chemical name of sanger`s reagent……

i) 1-fluro,2,4-dinitrobenzene(FDNB) ii) Edman`s

iii) Sanger`s iv) Phenyl isothiocyanate

9)The glycosidic bonds at the branching points in the structure of starch are ……

i) α- 1,4-glycosidic bond ii) β-1,4-glycosidic bond

iii) α-1-6-glycosidic bond iv) β-1,6-glycosidic bond.

10)Name the sulfur containing essential amino acid……

i) Glyane ii) Proline

iii) Methionine iv) Valine

11)Name the glycolipids containing N-acetylneuraminic acid……..

i) Cerebroside ii) Phospholipid

iii) Glycerophospholipid iv) Gangliosides

12)The number of mg of KOH required to hydrolyse 1 g fat or oil is known as……..

i) Iodine number ii) Reichert- Meissl number

iii) Acid number iv) Saponification number

13)The non-protein oart of holoenzyme…….

i) Coenzyne ii) apoenzyme

iii) Prosthetic group iv) Cafactor

14)Enzymes lose the catalytic activity at temperature above 70 c due to ……..

i) Denaturation ii) Renaturation

iii) Proteolysis iv) Recombination

15)In the feedback regulation, the end product binds at ……..

i) Active site ii) Allosteric site

iii) E- s complex iv) none of these

16)The bonds in protein structure that are not broken on denaturation……

i) Hydrogen bonds ii) peptide bonds

iii) ionic bonds iv) disulfide bonds

17)The imino acid found in protein structure…….

i) Arginine ii) Proline

iii) Histidine iv) Lysine

18)The nitrogenous base present in Lecithin…….

i) choline ii) Ethanolamine

iii) Inositol iv) Serine

19)The number of double bonds present in arachidonic acid ……

i) 1 ii) 2

iii) 3 iv) 4

20)Ribose and Deoxyribose differ in structure around a single carbon,namely……

i) C_2 ii) C_2

iii) C_3 IV) C_4

21)One of the following is not an aldose…….

i) Glucose ii) Galactose

iii) Mannose iv) Fructose

22)The following polysaccharide is composed of β-glycosidic bonds……..

i) Starch ii) Glycogen

iii) Dextrin iv) Cellulose

23)The carbon atoms involved in the osazone foemation…….

i) 1 & 2 ii) 2 & 3

iii) 3 & 4 iv) 5 & 6

24)Peptide bond is formed by combination of amino acid and ……

i) Carboxyl group ii) Ester group

iii) Ether group iv) Amino group

25)If two monosaccharides differ in configuration around a single carbon atam, they are known as……..

i) Epimers ii) Anomers

iii) Enantiomers iv) Tautomers

26)The grams of iodine absorbed by 100g of fat or oil is……..

i) saponification number ii) Iodine number

iii) Acid number iv) Amine group

27)The α & β cyclic forms of D-glucose are refferd to as……..

i) Epimers ii) Anomers

iii) Enantiomers iv) Tautomers

28)…….. Exclusively found in animals is the most abundant animalsterol.

i) Cholesterol ii) Ergosterol

iii) Stigmasterol iv) β- sistosterol

29)Bonds responsible for protein structure are ……..

i) Covalent bonds ii) non- covalent bonds

iii) Hydrogen bonds iv) All of above

30)The phenomenon of disorganization of native protin structure is known as ……

i) Denaturation ii) Renaturation

iii) Recombination iv) Stabilization

Q.2) Brief Questions:

1) Write in brief about “Starch” as a polysaccharide.

2) Write in brief about “Cellulose” as a polysaccharide.

3) Write in brief about “Glycogen” as a polysaccharide.

4) Write in detail steps involved in Sanger’s method.

5) Write in detail steps involved in Edman’s method.

6) Write in detail forces involved in maintaining different structural levels of proteins.

7) Classify in detail all the six major classes of enzymes.

8) Derive the Michaelis Menten equation.

9) Explain in detail all three types of enzyme inhibition.

10) Explain in detail disaccharide with example and structure.

Q.3) Short notes:

1) Glucose

2) Fructose

3) Fehling test

4) Phenyl hydrazine test

5) Zwitter ion

6) Isoelectric Ph

7) Ninhydrin reaction and its significance

8) Tertiary structure of protein

9) Lock and key theory

10) induced fit theory

11) competitive inhibition

12) isoenzymes of LDH

13) Cholesterol

14) Phospholipids

15) fluid mosaic model