1.

Ferrocene is :

(a) $Fe(\eta^5\text{-}C_5H_5)_2$

(b) $Fe(\eta^2\text{-}C_5H_5)_2$

(c) $Cr(\eta^5\text{-}C_5H_5)_5$

(d) $Os(\eta^5\text{-}C_5H_5)_2$

2.

Phospholipids are esters of glycerol with

(a) one carboxylic acid residue and two phosphate groups

(b) three phosphate groups

(c) three carboxylic acid residues

(d) two carboxylic acid residues and one phosphate groups

3.

Which one of the following gives positive Fehling's solution test ?

(a) Sucrose

(b) Glucose

(c) Fats

(d) Protein

4.

Which of the following is the sweetest sugar?

(a) Sucrose

(b) Glucose

(c) Fructose

(d) Maltose

5.

Which one of the following sets of monosaccharides forms sucrose ?

(a) a-D-galactopyranose and a-D-glucopyranose

(b) a-D-glucopyranose and b-D-fructofuranose

(c) b-D-glucopyranose and a-D-fructofuranose

(d) b-D-glucopyranose and b-D-fructofuranose

6.

a-D-(+)-glucose and b-D-(+)-glucose are

(a) anomers

(b) epimers

(c) enantiomers

(d) geometrical isomers

7.

The couplings between base units of DNA is through

(a) hydrogen bonding

(b) electrostatic bonding

(c) covalent bonding

(d) van der waal's forces

8.

Which of the following does not exihibit the phenomena of mutarotation?

(a) (+) Sucrose

(b) (+) Lactose

(c) (+) Maltose

(d) (-) Fructose

9.

RNA and DNA are chiral molecules, their chirality is due to

(a) L-sugar component

(b) chiral bases

(c) chiral phosphate ester units

(d) D-sugar-component

10.

Which of the following is corect about H-bonding in nucleotides ?

(a) A-T, G-C

(b) A-G, T-C

(c) G-T, A-C

(d) A-A, T-T

11.

Glycolysis is

(a) oxidation of glucose to pyruvate

(b) conversion of glucose to haem

(c) oxidation of glucose to glutamate

(d) conversion of pyruvate to citrate

12.

Which is not true statement ?

(a) a-carbon of a-amino acid is asymmetric

(b) All proteins are found in L-form

(c) Human body can synthesis ll proteins they need

(d) At pH = 7 both amino and carboxylic groups axist in ionised form

13.

Which one of the following is an amine hormone?

(a) Thyroxin

(b) Oxypurin

(C) Insulin

(d) Progesterone

14.

An example of biopolymer is

(a) teflon

(b) neoprene

(c) nylon-66

(d) DNA

15.

Which of the following is a non-reducing sugar ?

(1) Glucose

(2) Fructose

(3) Sucrose

(4) Galactose

16.

When glucose is reacted with phenyl hydrazine then osazone is formed. In this reaction how many phenyl hydrazine molecules are used ?

(1) 1

(2) 2

(3) 3

(4) 4

17.

Sucrose on treatement with conc. HCl produces:-

(1) Glucose

(2) Fructose

(3) Glucose + Fructose

(4) Maltose

18.

Which type of amino acid is lysine ?

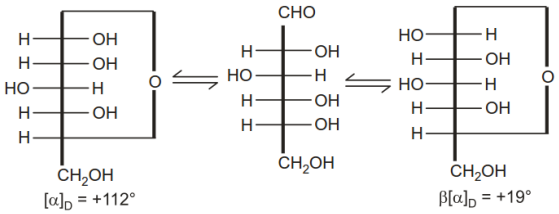
(1) b - amino acid

(2) Acidic

(3) Basic

(4) Neutral

19.



The above process in which a and b form remain in equilibrium with acyclic form and a change in optical rotation is observed which is called as–

(1) Mutarotation

(2) Epimerisation

(3) Condensation

(4) Inversion

20.

At iso-electric point:

(a) conc. of cation is equal to conc of anion

(b) Net charge is zero.

(c) Maximum conc. of di-polar ion (Zwitterion) will be present

(d) All of the above

21.

Which amino acid does not contain chiral centre ?
(a) Valine
(b) Leucine
(c) Glycine
(d) Iso-leucine

22.

Which of the following pair gives same phenyl osazone ?

(a) D-Glucose and D-Allose
(b) D-Glucose and D-Alfrose
(c) D-Glucose and D-Mannose
(d) D-Glucose and D-Talose

23.

Proteins mainly contain:
(a) C, H, O and N
(b) only C and H
(c) C, H and O
(d) N and H

24.

The main structural feature of protein is:

(a) the ester linkage

(b) the ether linkage

(c) the peptide linkage

(d) all of these

25.

Keratin, a structural protein is present in:
(a) hair
(b) skin
(c) wool
(d) all of these

26.

Blood protein is ?
(a)albumin
(b)haemoglobin
(c)both (a) and (b)
(d)none of these

27.

A vitamin which plays a vital role in the coagulating property of blood is:-

(a) vitamin A
(b) vitamin D
(c) vitamin B
(d) vitamin K

28.

Which is not a poison for enzymes?

(a) CN^- (b) Fe^{3+}

(c) Pb^{2+} (d) AsO_4^{3-}

29.

The non-proteinous substances which certain enzymes require for their activity are called:

(a) catalysts (b) inhibitors

(c) co-enzymes (d) epimers

30.

Antibodies are ?
(a) Carbohydrates
(b) proteins
(c) phospholipids
(d) lipids

31.

Which of the following statements about enzymes is incorrect?

(a) The catalytic action of an enzyme is not specific

(b) An enzymatic reaction is highly sensitive to temperature

(c) The catalytic action of enzymes is due to their capacity to lower the energy of activation of a particular reaction

(d) None of the above

32.

An antigen develops antibodies which protect the body from their harmful effects. The antibodies are:-

(a) immunoglobulins

(b) phospholipids

(c) albumins

(d) lymphocytes

33.

The anti-sterility or anti- reproductory vitamin is:

(a) B

(b) C

(c) D

(d) E

34.

Which of the following is protein hormones?

(a) Insulin

(b) Oxytocin

(c) Both (a) and (b)

(d) None of the above

35.

The function of DNA is:

(a) To synthesize RNA

(b) To synthesize the necessary proteins

(c) To carry the hereditary characteristics from generation to generation

(d) all are correct

36.

Which one of the following vitamins contains a metal atom?
(a) Riboflavin
(b) Vitamin B_{12}
(c) Vitamin A
(d) Vitamin B_6

37.

Adenosine is an example of:

(a) nucleotide

(b) nucleoside

(c) purine base

(d) pyrimidine base

38.

Which of the following statements is not correct?
(a) Insulin maintains sugar level in the blood of a human body
(b) Ovalbumin is a simple food reserve in egg white
(c) Blood proteins thrombin and fibrinogen are involved in blood clotting
(d) Denaturation makes the proteins more active

39.

In a protein molecule, various amino acids are linked together by

(a) b-glycosidic bond

(b) peptide bond

(c) dative bond

(d) a-glycosidic bond

40.

Which of the following hormones is produced under the condition of stress which stimulates glycogenolysis in the liver of human beings?

(a) Thyroxin (b) Insulin

(c) Adrenaline (d) Estradiol

41.

Deficiency of vitamin B_1 causes the disease

(a) convulsions

(b) beri-beri

(c) cheilosis

(d) sterility

42.

Which one of the following sets of monosaccharides forms sucrose?
(a) a-D-galactopyranose and a-D-glucopyranose
(b) α-D-glucopyranose and b-D-fructofuranose
(c) b-D -glucopyranose and a-D fructofuranose
(d) α-D-glucopyranose and b-D-fructopyranose

43.

Which one of the following does not exhibit the phenomenon of mutarotation ?

(a) (+) Sucrose

(b) (+) Lactose

(c) (+)Maltose

(d) (-)Fructose

44.

During the process of digestion, the proteins present in food materials are hydrolysed to amino acids. The two enzymes involved in the process

$$\text{Proteins} \xrightarrow{\text{Enzyme (a)}} \text{Polypeptides} \xrightarrow{\text{Enzyme (B)}} \text{Amino acids,}$$

are respectively:
(a) amylase and maltase
(b) diastase and lipase
(c) pepsin and trypsin
(d) invertase and zymase

45.

The human body does not produce

(a) DNA

(b) vitamins

(c) hormones

(d) enzymes

Fill OMR Sheet