1. Lecithin, a small molecular weight organic compound found in living tissues, is an example **(2024)**

(a) Phospholipids (b) Glycerides

(c) Carbohydrates (d) Amino acids

2. The cofactor of the enzyme carboxypeptidase is: **(2024)**

(a) Niacin (b) Flavin

(c) Haem (d) Zinc

3. Inhibition of Succinic dehydrogenase enzymes by malonate is a classical example of: **(2024)**

(a) Feedback inhibition

(b) Competitive inhibition

(c) Enzyme activation

(d) Cofactor inhibition

4. Match List –I with List – II **(2024)**

List –I		List –II	
A	GLUT-4	I.	Hormone
B.	Insulin	II.	Enzymes
C.	Trypsin	III.	Intercellular ground substance
D.	Collagen	IV.	Enable glucose transport into cells

Choose the correct answer from the options given below :

(a) A-I, B-II, C-III, D-IV

(b) A-II, B-III, C-IV, D-I

(c) A-III, B-IV, C-I, D-II

(d) A-IV, B-I, C-II, D-III

5. Match List I with List II : **(2024)**

List –I		List –II	
A	Lipase	I.	Peptide bond
B.	Nuclease	II.	Ester bond
C.	Protease	III.	Glycosidic bond
D.	Amylase	IV.	Phosphodiester

Choose the correct answer from the options given below:

(a) A-III, B-II, C-I, D-IV

(b) A-II, B-IV, C-I, D-III

(c) A-IV, B-I, C-III, D-II

(d) A-IV, B-II, C-III, D-I

6. Regarding catalytic cycle of an enzyme action, select the correct sequential steps: **(2024)**

A. Substrate enzyme complex formation.
B. Free enzyme ready to bind with another substrate.
C. Release of products.
D. Chemical bonds of the substrate broken.
E. Substrate binding to active site.

Choose the correct answer from the options given below:

(a) A, E, B, D, C (b) B, A, C, D, E

(c) E, D, C, B, A (d) E, A, D, C, B

7. Cellulose does not form blue colour with Iodine because **(2023)**

(a) It is a helical molecule
(b) It does not contain complex helices and hence cannot hold iodine
(c) It breaks down when reacts with it
(d) It is a disaccharide

8. **Statement I :-** A proton is imagined as a line, the left and represented by first amino acid(C-terminal) and the right end represented by last amino acid (N-terminal).

Statememnt II :- Adult human haemoglobin, consists of 4 subunits (two subunits of α type and two subunits of β type. **(2023)**

(a) Both statement I and Statement II are false.
(b) Statement I is true but statement II is false.
(c) Statement I is false but statement II is true.
(d) Both statement I and statement II are true.

9. **Statement I:** Low temperature preserves the enzyme in a temporarily inactive state whereas high temperature destroys enzymatic activity because proteins are denatured by heat.
Statement II: When the inhibitor closely resembles the substrate in its molecular structure and inhibits the activity of the enzyme, it is known as competitive inhibitor. **(2023)**
(a) Both statement I and statement II are false.
(b) Statement I is true but statement II is false.
(c) Statement I is false but statement II is true.
(d) Both statement I and statement II are true.

10. When a carrier protein facilitates the movement of two molecules across the membrane in same direction, it is called **(2022)**
(a) Symport (b) Uniport
(c) Transport (d) Antiport

11. Match List-I with List-II **(2022)**

List -I		List – II	
(A)	Adenine	(I)	Pigment
(B)	Anthocyanin	(II)	Polysaccharide
(C)	Chitin	(III)	Alkaloid
(D)	Codeine	(IV)	Purine

Choose the correct answer from the options given below
(a) A-I, B-IV, C-III, D-II
(b) A-IV, B-I, C-II, D-III
(c) A-IV, B-III, C-II, D-I
(d) A-III, B-I, C-IV, D-II

12. Primary proteins are also called as polypeptides because: **(2022)**
(a) They can assume many conformations
(b) They are linear chains
(c) They are polymers of peptide monomers
(d) Successive amino acids are joined by peptide bonds

13. Choose the incorrect enzymatic reaction: **(2022)**
(a) $Dipeptides \xrightarrow{Dipeptidases} Amino\ acids$
(b) $Maltose \xrightarrow{Maltase} Glucose + Fructose$
(c) $Sucrose \xrightarrow{Sucrase} Glucose + Fructose$
(d) $Lactose \xrightarrow{Lactase} Glucose + Galactose$

14. **Statement I:** Amino acids have a property of ionizable nature of $-NH_2$ and $-COOH$ groups, hence have different structures at different pH.
Statement II: Amino acids can exist as Zwitterionic form at acidic and basis pH. **(2022)**
(a) Statements I is incorrect but statements ii is correct.
(b) Both statements I and statements II are correct.
(c) Boths statements I and statement II are incorrect.
(d) Statement I is correct but statement II is Incorrect

15. In the enzymes which catalyses the breakdown of : $H_2O_2 \rightarrow H_2O + O_2$ **(2022)**
(a) Niacin
(b) Nicotinamide adenine dinucleotide
(c) Haem
(d) Zinc

16. Read the following statements on lipids and find out correct set of statements : **(2022)**
(A) Lecithin found in the plasma membrane is a glycolipid
(B) Saturated fatty acids possess one or more c = c bonds
(C) Gingely oil has lower melting point, hence remains as oil in winter
(D) Lipids are generally insoluble in water but soluble in some organic.
(E) When fatty acid is esterified with glycerol, monoglycerides are formed
Choose the correct answer from the option given below:
(a) (A), (B) and (C) only
(b) (A), (D) and (E) only
(c) (C), (D) and (E) only
(d) (A), (B) and (D) only

17. A dehydration reaction links two glucose molecule to product maltose. If the formula for glucose is $C_6H_{12}O_6$ then what is the formula maltose ? **(2022)**

(a) $C_{12}H_{20}O_{10}$ (b) $C_{12}H_{24}O_{12}$

(c) $C_{12}H_{22}O_{11}$ (d) $C_{12}H_{24}O_{11}$

18. Match List -I with List -II

List -I (Biological Molecule)		**List -I (Biological Functions)**	
(A)	Glycogen	(i)	Hormone
(B)	Globulin	(ii)	Biocatalyst
(C)	Steroids	(iii)	Antibody
(D)	Thrombin	(iv)	Storage product

Choose the correct answer from the options given below : **(2022)**

(a) A-iii, B-ii, C-iv, D-(i)

(b) A-iv, B-ii, C-i, D-(iii)

(c) A-ii, B-iv, C-iii, D-(i)

(d) A-iv, B-iii, C-i, D-(ii)

19. Which of the following are not secondary metabolites in plants? **(2021)**

(a) Amino acids, glucose

(b) Vinblastine, curcumin

(c) Rubber, gums

(d) Morphine, codeine

20. Match List-1 with List-2 **(2021)**

	List-1		**List-2**
A.	Protein	(i)	C = C double bonds
B.	Unsaturated fatty acid	(ii)	Phosphodiester bonds
C.	Nucleic acid	(iii)	Glycosidic bonds
D.	Polysaccharide	(iv)	Peptide bonds

Choose the correct answer from the options given below

(a) A-(i) B-(iv) C-(iii) D-(ii)

(b) A-(ii) B-(i) C-(iv) D-(iii)

(c) A-(iv) B-(iii) C-(i) D-(ii)

(d) A-(iv) B-(i) C-(ii) D-(iii)

21. Identify the incorrect pair **(2021)**

(a) Toxin - Abrin

(b) Lectins - Concanavalin A

(c) Drugs - Ricin

(d) Alkaloids – Codeine

22. Following are the statements with reference to 'lipids' **(2021)**

A. Lipids having only single bonds are called unsaturated fatty acids

B. Lecithin is a phospholipid

C. Trihydroxy propane is glycerol

D. Palmitic acid has 20 carbon atoms including carboxyl carbon

E. Arachidonic acid has 16 carbon atoms

Choose the correct answer from the options given below

(a) C and D only (b) B and C only

(c) B and E only (d) A and B only

23. Identify the basic amino acid from the following **(2020)**

(a) Glutamic acid (b) Lysine

(c) Valine (d) Tyrosine

24. Match the following. Choose the correct option from the following **(2020)**

Column I		**Column II**	
1.	Inhibitor of catalytic activity	(i)	Ricin
2.	Possess peptide bonds	(ii)	Malonate
3.	Cell wall material in fungi	(iii)	Chitin
4.	Secondary metabolite	(iv)	Collagen

1 2 3 4

(a) (iii) (i) (iv) (ii)

(b) (iii) (iv) (i) (ii)

(c) (ii) (iii) (i) (iv)

(d) (ii) (iv) (iii) (i)

25. Which one of the following is the most abundant protein in the animals? **(2020)**

(a) Collagen

(b) Lectin

(c) Insulin

(d) Haemoglobin

26. Identify the substances having glycosidic bond and peptide bond, respectively in their structure **(2020)**
(a) Glycerol, trypsin
(b) Cellulose, lecithin
(c) Inulin, insulin
(d) Chitin, cholesterol

27. Identify the statement which is incorrect **(2020 Covid Re-NEET)**
(a) Glycine is an example of lipids
(b) Lecithin contains phosphorus atom in its structure
(c) Tyrosine possesses aromatic ring in its structure
(d) Sulphur is an integral part of cysteine

28. Match the following **(2020 Covid Re-NEET)**

1.	Aquaporin	(i)	Amide
2.	Asparagine	(ii)	Polysaccharide
3.	Abscisic acid	(iii)	Polypeptide
4.	Chitin	(iv)	Carotenoids

1 2 3 4
(a) (ii) (iii) (iv) (i)
(b) (ii) (i) (iv) (iii)
(c) (iii) (i) (ii) (iv)
(d) (iii) (i) (iv) (ii)

29. Which of the following glucose transporters is insulin- dependent? **(2019)**
(a) GLUT I (b) GLUT II
(c) GLUT III (d) GLUT IV

30. Concanavalin A is **(2019)**
(a) An alkaloid (b) An essential oil
(c) A lectin (d) A pigment

31. Consider the following statement
A. Coenzyme or metal ion that is tightly bound to enzyme protein is called prosthetic group
B. A complete catalytic active enzyme with its bound prosthetic group is called apoenzyme **(2019)**
(a) Both A and B are true
(b) A is true but B is false
(c) Both A and B are false
(d) A is false but B is true

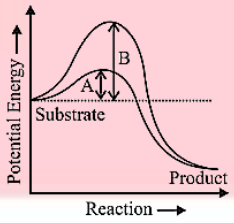
32. The two functional groups characteristic of sugars are **(2018)**
(a) Hydroxyl and methyl
(b) Carbonyl and methyl
(c) Carbonyl and phosphate
(d) Carbonyl and hydroxyl

33. Which one of the following statements is correct, with reference to enzymes? **(2017)**
(a) Apoenzyme = Holoenzyme + Coenzyme
(b) Holoenzyme = Apoenzyme + Coenzyme
(c) Coenzyme = Apoenzyme + Holoenzyme
(d) Holoenzyme = Coenzyme + Cofactor

34. Which of the following are not polymeric? **(2017)**
(a) Nucleic acids (b) Proteins
(c) Polysaccharides (d) Lipids

35. A fat molecule is formed from **(2017)**
(a) Three glycerol molecules and one fatty acid molecule
(b) One glycerol molecule and one fatty acid molecule
(c) Three glycerol molecules and three fatty acid molecules
(d) One glycerol molecule and three fatty acid molecules

36. Which of the following describes the given graph correctly? **(2016 -II)**



(a) Endothermic reaction with energy A in absence of enzyme and B in presence of enzyme
(b) Exothermic reaction with energy A in absence of enzyme and B in presence of enzyme
(c) Endothermic reaction with energy A in presence of enzyme and B in absence of enzyme
(d) Exothermic reaction with energy A in presence of enzyme and B in absence of enzyme

37. Which of the following is the least likely to be involved in stabilising the three–dimensional folding of most proteins? **(2016 - II)**
(a) Hydrophobic interaction
(b) Ester bonds
(c) Hydrogen bonds
(d) Electrostatic interaction

38. A non-proteinaceous enzyme is **(2016 - II)**
(a) Ligase
(b) Deoxyribonuclease
(c) Lysozyme
(d) Ribozyme

39. Which one of the following statement is wrong? **(2016 - I)**
(a) Sucrose is a disaccharide
(b) Cellulose is a polysaccharide
(c) Uracil is a pyrimidine
(d) Glycine is a sulphur containing amino acid

40. Which one of the following statement is incorrect? **(2015)**
(a) The competitive inhibitor does not affect the rate of breakdown of the enzyme substrate complex
(b) The presence of the competitive Inhibitor decreases the Km of the enzyme for the substrate
(c) A competitive inhibitor reacts with the enzyme to form an enzyme inhibitor complex
(d) In competitive inhibition, the inhibitor molecule is not chemically changed by the enzyme

41. Chitinous exoskeleton of arthropods is formed by the polymerisation of **(2015 Re)**
(a) D- glucosamine
(b) N- acetyl glucosamine
(c) Lipoglycans
(d) Keratin sulphate and chondroitin Sulphate

42. Select the option which is not correct with respect to enzyme action **(2014)**
(a) Malonate is a competitive inhibitor of succinic dehydrogenase
(b) Substrate binds with enzyme at its active site
(c) Addition of lot of succinate does not reverse the inhibition of succinic dehydrogenase by malonate
(d) A non-competitive inhibitor binds the enzyme at a site distinct from that which binds the substrate

43. Which one of the following is a non-reducing carbohydrate? **(2014)**
(a) Ribose 5-phosphate
(b) Maltose
(c) Sucrose
(d) Lactose

44. Essential chemical components of many coenzymes are **(2013)**
(a) Vitamins (b) Proteins
(c) Nucleic acids (d) Carbohydrates

45. Transition state structure of the substrate formed during an enzymatic reaction is **(2013)**
(a) Permanent and stable
(b) Transient but stable
(c) Permanent but unstable
(d) Transient and unstable

46. A phosphoglyceride is always made up of **(2013)**
(a) A saturated or unsaturated fatty acid esterified to a phosphate group which is also attached to a glycerol molecule
(b) Only a saturated fatty acid esterified to a glycerol molecule to which a phosphate group is also attached
(c) Only an unsaturated fatty acid esterified to a glycerol molecule to which a phosphate group is also attached
(d) A saturated or unsaturated fatty acid esterified to a glycerol molecule to which a phosphate group is also attached