# BIOMOLECULES, POLYMER & CHEMISTRY IN EVERY DAY LIFE EXERCISE

- 1. The nitrogenous base having two possible hydrogen bonding sites is
  - (1) Thymine
- (2) Cytosine
- (3) Guanine
- (4) None
- **2.** The correct statement in respect of protein haemoglobin is that it
  - (1) Maintains blood sugar level
  - (2) Acts as an oxygen carrier in the blood
  - (3) Forms antibodies and offers resistance to diseases
  - (4) acts as a catalyst for biological reactions
- 3. The hormone that helps in the conversion of glucose to glycogen is
  - (1) Bile acids
- (2) Adrenaline
- (3) Insulin
- (4) Cortisone
- 4. The helical structure of protein is stabilized by
  - (1) Hydrogen bonds
- (2) ether bonds
- (3) peptide bonds
- (4) dipeptide bonds
- **5.** Which of the following structures represents the peptide chain –

- Which functional group participates in disulphide bond formation in proteins –
  - (1) Thioether
- (2) Thiol
- (3) Thioester
- (4) Thiolactone

- 7. The cell membranes are mainly composed of -
  - (1) Phospholipids
- (2) Proteins

(3) Fats

- (4) Carbohydrates
- **8.** Which is simplest amino acid
  - (1) Alanine
- (2) Asparagine
- (3) Glycine
- (4) Tyrosine
- **9.** Which of the following biomolecules is insoluble in water
  - (1)  $\alpha$ -Keratin
- (2) Haemoglobin
- (3) Ribonuclease
- (4) Adenine
- **10.** The presence or absence of hydroxy group on which carbon atom of sugar differentiates RNA and DNA?
  - $(1) 3^{rd}$
- (2) 4<sup>th</sup>
- $(3) 1^{st}$
- $(4) 2^{nd}$
- **11.** The change in the optical rotation of freshly prepared solution of glucose is known as:-
  - (1) tautomerism
- (2) racemisation
- (3) specific rotation
- (4) mutarotation
- **12.** Which one of the following bases is not present in DNA?
  - (1) Cytosine
- (2) Thymine
- (3) Quinoline
- (4) Adenine
- **13.** Lysine;  $H_2N-(CH_2)_4-CH-COOH$  is :-  $NH_2$ 
  - (1)  $\alpha$ -Amino acid
  - (2) γ-amino acid
  - (3) Amino acid synthesised
  - (4) β-Amino acid
- **14.** In fibrous protein, polypeptide chains are held toegether by:-
  - (1) H-bond
  - (2) Disulphide linkage
  - (3) Electrostatic forces attraction
  - (4) 1 and 2 both
- **15.** Which is correct in following
  - (1) Monosaccharides also known as sugars
  - (2) Polysaccharides are non sugars
  - (3) Maltose and Lactose are reducing sugar
  - (4) All of these

#### BIOMOLECULES, POLYMER, CHEMISTRY IN EVERY DAY LIFE (3) those which have equal number of amino acid **16.** Structure of glycogen is similar to :and carboxyl groups (1) Alylose (2) Amylopectin (4) None of these (4) Glucose (3) Cellulose Which of the following gives osazone different from 17. 27. Which of the following is not essential amino acid – the other three :-(1) Serine (2) Lysine (1) Glucose (2) Mannose (3) Threonine (4) Tryptophan (3) Galactose (4) Fructose 28. In acidic & alkaline solution amino acids exists as a -Anomers of glucose ( $\alpha$ -form & $\beta$ -form) are differ in (1) Positive ion & negative ion respectively the stereochemistry at which carbon -(2) Negative ion & positive ions respectively (1) C-1(2) C-2(3) Neutral in both medium (3) C-3(4) All of these (4) None of these **19**. Sucrose in presence of invertase on hydrolysis gave – 29. In which of following shapes are found in tertiary (1) Glucose (2) Fructose structure of proteins -(3 Ethyl alcohol (4) 1 & 2 both (1) Fibrous (2) Globular 20. Which of the following B group vitamins can be (4) None of these (3) Both of these stored in our body. 30. The example of globular protein is (1) Vitamin B<sub>1</sub> (2) Vitamin B<sub>2</sub> (1) Silk (2) Collagen (3) Vitamin B (4) Vitamin B<sub>12</sub> (4) All of these (3) Haemoglobin 21. Which of the following are polysaccharides – 31. If a native protein is subjected to physical or chemi-(a) Starch (b) cellulose cal treatment which may disrupt its various forms (c) dextrins (d) glycogen without affecting its primary structure, are called -(1) a, b & c (2) a, b, d (1) Inactive protein (3) a & c (4) a,b, c, d (2) Denatured protein (3) Both of these 22. Cellulose can not be tested by followings -(4) None of these (1) Fehling's solution (2) Tollen's reagent **32**. The coagulation of egg protein while boiling of egg (4) None of these (3) Both of these is called -23. On hydrolysis of proteins, the product is/are – (1) Reversible protein denaturation (1) Amino acids (2) Peptides (2) Irreversible protein denaturation (3) Renaturation (3) Enzymes (4) 1 & 2 both (4) None of these 24. Which of the following do not have hemiacetal group:-33. An enzyme molecule may contain protein and (1) Fructose (2) Maltose non-protein part. Non-protein part is known as:-(3) Sucrose (4) Glucose (2) Cofactor (1) Holoenzyme (3) Inverted enzyme (4) None of these 25. In amino acids, more number of amino than car-

34.

**35**.

boxyl groups makes it -

(2) Basic

Which amino acids are called non essential -

pared to carboxyl groups

(1) those which can be synthesized in the body.

(2) those which have more amino groups as com-

(4) None of these

(1) acidic

**26**.

(3) Neutral

Cofactor which gets attached to the enzyme at the

(2) Apoenzyme

(2) Nucleus

(4) Chloroplasts

(4) None of these

time of reaction are known as

Mainly DNA is localized in -

(1) Coenzymes

(1) Cytoplasm

(3) Mitochondria

(3) Prothetic group

#### BIOMOLECULES, POLYMER, CHEMISTRY IN EVERY DAY LIFE 36. RNA contains following pyrimidine bases – 47. Weakest intermolecular forces are present in :-(1) Neoprene (2) Terulene (a) Thymine (b) Uracil (3) Polystyrene (4) Bakelite (c) Cytosine (d) Adenine 48. Thermosetting polymer, Bakelite is formed by the (1) b & c (2) a, b, c reaction of phenol with :-(3) a. b. d (4) All of these (1) CH<sub>3</sub>CH<sub>2</sub>CHO (2) CH<sub>3</sub>CHO DNA molecules can duplicate themselves-called -**37**. (3) HCHO (4) HCOOH (1) Replication (2) Translation 49. Which one is classified as a condensation polymer? (3) Transcription (4) None of these (1) Teflon (2) Acrylonitrile 38. Which of the following carbohydrates are branched (3) Dacron (4) Neoprene polymer of glucose. 50. Novolac is a: (1) Glycogen (2) Amylopectin (1) linear polymer of urea and formaldehyde (3) Cellulose (4) Both (1) & (2) (2) crosslink polymer of urea and formaldehyde **39**. Vitamin K (3) linear polymer of phenol and formaldehyde (1) Is phylloquinone (4) crosslink polymer of phenol and formaldehyde (2) Soluble in oils and fats 51. Which of the following is not a semisynthetic polymer. (3) Deficiency lenthens the blood clotting (1) cis-polyisoprene (2) cellulose nitrate (4) All of these (3) cellulose acetate (4) valcanised rubber 40. Which of the following is not an amino acid Branched chain polymer is-**52**. (1) Histidine (2) Benzidine (1) High density polythene (3) Alanine (4) Proline 41. Vitamin C is called: (2) Low density polythene (1) Antisterility (2) Antiscurvy (3) Poly vinyl chloride (3) both of these (4) None of these (4) Bakelite 42. Reducing sugars are one which: 53. Mechanical properties like tensile strength, (1) reduce fehling's solutions elasticity, toughness etc, are governed by (2) not reduce tollen's reagent intermolecular forces. These intermolecular forces (3) Have bonded aldehydic or ketonic groups are -(4) All of these (1) Hydrogen bond (2) Vander waals force 43. Multiple deficiencies caused by lack of more than one vitamin are more common in human beings. (3) Both of these (4) None of these This condition of vitamin deficiency is known as **54.** Monomer unit of Nylon-6,6 is/are -(2) xerophthalmia (1) avitaminosis (1) Adipic acid (4) None of these (3) convulsions (2) 1,4-butamethylene diamine 44. Which vitamin is synthesize in human body from (3) Caprolactum carotene (1) Vitamin-A (2) Vitamin-C (4) All of these (4) All of these (3) Vitamin-K **55.** Which of following polymer is used as glass **45**. Which of the following is correct about H-bonding reinforcing materials in safety helmetsin nucleotide -(1) Terylene (2) Teflon (1) A-T G-C (2) A-G T-C (3) Terephthalic acid (4) Ethylene glycol (3) G-T A-C (4) A-A T-T **56**. Polymer used in radio and television cabinets-46. Which of the following is monomer unit of (1) PVC (2) Polystyrene polystyrene:-

**57**. Aspirin is also known as -(1) Methyl salicyclic acid (3) -CH<sub>2</sub>-CH-

(2) acetyl salicylate (4) Acetyl salicylic acid

(4) Glyptal

(3) Methyl salicylate

(3) Polypropene

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	··, · · ·-··.								
<b>58.</b>	Paracetamol is :-		67.	Which chemical is respon	ponsible for mood change.				
	(1) Analgesic	(2) Antipyretic		(1) Noradrenaline	(2) Dimetapp				
	(3) Both	(4) Antiseptic		(3) Seldane	(4) All				
	СООН		68.	Which is not an example	e of tranquilizer				
	OCOCH <sub>3</sub>			(1) Iproniazid	(2) Phenelzine				
<b>59</b> .	[O] is use	ed as	69.	(3) Ofloxacin	(4) Barbiturates				
	$\checkmark$			Morphine is used in					
	(1) Antiseptic	(2) Analgesic		(1) Cardiac pain	(2) Terminal cancer				
	(3) Antibiotic	(4) Micro organism		(3) Child birth	(4) All				
<b>60</b> .	Which among the follow		70.	The first effective antibacterial agent discovered by					
	(1) Equanil	(2) promethazine		Ehrlich					
	(3) Omeprazole	(4) Cimetidine		(1) Prontosil	(2) Azo dye				
61.	Which is incorrect staten			(3) Salvarsan	(4) Penicillin				
	(1) Drugs are chemicals (100-500 μ)	of low molecular masses	71.						
		vith macromolecular target		(1) Penicillin	(2) Aminoglycosides				
		ogical responce, they are		(3) Ofloxine	(4) Erythromycine				
	called as potential po	oisons	72.	Which is not Bacteriosta					
		hrerapeutic effect is called		(1) Erythromycin	(2) Penicillin				
	chemotherapy			(3) Tetracycline	(4) Chloromphenicol				
	(4) Medicines are used in treatment of disease	diagnosis, prevention and s	73.	Which broad spectrum antibiotic is given orally in case of typhoid and dysentery.					
<b>62</b> .	_	with natural action of		(1) Ampicillin	(2) Amoxycilline				
		with histamine are called.	7.4	(3) Ofloxacin	(4) Chloromphenicol				
	(1) Antidepressant	(2) Antihistamine	74.	Find incorrect match	Catagomi				
	(3) Antimicrobial	(4) Antipyretic		<b>Drug</b> (1) Chlordiazepoxide	<b>Category</b> Tranquilizer				
63.	Barbituric acid and its important class of	derivative constitutes an		(2) Chloramphenicol	Antibiotic				
	(1) Narcotic analgesic	(2) Antia <mark>llergic</mark>		(3) Veronal	Antiseptic				
	(3) Tranquilizers	(4) Antim <mark>icrobial</mark>		(4) Sulphanilamide	Antibiotic				
64.	Drugs bind to a site (ot	her than e <mark>nzym</mark> e's active	75.	Find incorrect match	T				
	site). This site is named i	S.		Drug	Treatment of				
	(1) Competitive site	(2) Alloste <mark>ric</mark> site		(1) Salvarsan	Syphilis				
	(3) Non-active site	(4) Super active site		(2) Chloramphenicol	Typhoid Cardiag pain				
<b>65</b> .	Name of drug that bind inhibit its natural function	to the receptor site and		<ul><li>(3) Morphine</li><li>(4) Mixture of Mg(OH)<sub>2</sub></li></ul>	Cardiac pain Analgesic				
	(1) Antagonist			and $Al(OH)_3$					
	(2) Antireceptor		76.		ner is of great value to				
	(3) Antacid			diabetic person. (1) Aspartame	(2) Saccharin				
	(4) Non-additive analges	ic		(3) Sucrose	(4) Alitame				
66.	First popular antacid dru	ıg was	77.	Which is mild tranquilizer used in controlling					
	(1) Cimetidine	(2) Ranitidine	170	depression and hypertension.					
	(3) Zantac	(4) Equanil		(1) Meprobamate	(2) Norethindrone				
				(3) Ethynylestradiol	(4) Terpineol				

ical is responsible for mood change. aline (2) Dimetapp (4) All an example of tranquilizer (2) Phenelzine (4) Barbiturates used in (2) Terminal cancer pain (4) All ctive antibacterial agent discovered by (2) Azo dye (4) Penicillin Bactericidal antibiotic. (2) Aminoglycosides (4) Erythromycine Bacteriostatic antibiotic. (2) Penicillin ycin (4) Chloromphenicol spectrum antibiotic is given orally in oid and dysentery. (2) Amoxycilline (4) Chloromphenicol ct match Category epoxide Tranquilizer henicol Antibiotic Antiseptic amide Antibiotic ct match Treatment of Syphilis henicol **Typhoid** Cardiac pain f Mg(OH), Analgesic -I)<sub>3</sub> cial sweetener is of great value to

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- **78.** 0.2% solution of phenol and 0.2-0.4 ppm chlorine in aqueous solution respectively behave as.
  - (1) Antiseptic, Disinfectant
  - (2) Disinfectant, Antiseptic
  - (3) Disinfectant, Antacid
  - (4) Antiseptic, Antacid
- **79.** The first popular artificial sweetening agent is.
  - (1) Saccharin
- (2) Asparfame
- (3) Alitame
- (4) Sucralose
- **80.** Which is stable at cooking temperature & doesn't provide calories.
  - (1) Aspartame
- (2) Saccharin
- (3) Sucralose
- (4) Alitame
- **81.** Highest sweetness value found in
  - (1) Aspartame
- (2) Alitame
- (3) Saccharin
- (4) Sucralose
- **82.** Which sweetening agent is used in soft drinks.
  - (1) Aspartame
- (2) Saccharin
- (3) Sucralose
- (4) Alitame
- **83.** Which is unstable at cooking temperature
  - (1) Aspartame
- (2) Alitame
- (3) Saccharin
- (4) All

- **84.** Soap are sodium or potassium salt of fatty acid unlike.
  - (1) Palmitic acid
- (2) Oleic acid
- (3) 1 & 2
- (4) Maleic acid
- **85.** Which enhance lathering property of soap.
  - (1) Sodium carbonate
  - (2) Sodium rosinate
  - (3) Sodium stearate
  - (4) Trisodium phosphate
- **86.** To make soft soap, saponification contain.
  - (1) NaOH
- (2) KOH
- (3) Glycesol
- (4) Glycol
- **87.** Hair conditioners contain which kind of detergent.
  - (1) Cationic
- (2) Anionic
- (3) Non ionic
- (4) All
- **88.** Which is used as food preservatives
  - (1) NaCl
- (2) Sugar
- (3) Vegetable oil
- (4) All
- **89.** Which is added to soap to impart antiseptic properties.
  - (1) Bithionol
- (2) Soframycin
- (3) Glycol
- (4) Ethanol

## **ANSWER KEY**

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	1	2	3	1	2	2	1	3	1	4	4	3	1	4	4
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	2	3	1	4	4	4	3	4	3	2	1	1	1	3	3
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	2	2	2	1	2	1	1	4	4	2	2	1	1	1	1
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	4	1	3	3	3	1	2	3	1	1	2	4	3	2	1
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	2	2	3	2	1	1	1	3	4	1	4	2	4	3	4
Que.	76	77	78	79	80	81	82	83	84	85	86	87	88	89	
Ans.	2	1	1	1	3	2	1	1	4	2	2	1	4	1	