Exercise-1

ONLY ONE OPTION CORRECT TYPE

Section (A) : Chemisty in every day life

1.	Morphine is used as an (1) Antipyretic	(2) Antiseptic	(3) Analgesic	(4) Insecticide
2.	Which of the following is (1) Reserpine	s not an alkaloid ? (2) Morphine	(3) Quinine	(4) Phenylbutazone
3.	The antibiotic used for ((1) Penicillin	curing tuberculosis is : (2) Streptomycin	(3) Tetracycline	(4) Chloromycetin
4.	The drugs used to get r (1) Antipyretics	elief from pain are called (2) Analgesics	: (3) Antibiotics	(4) Antiseptics
5.	Which of the following is (1) lodoform	s not an antiseptic drug ? (2) Dettol	(3) Gammexane	(4) Gentian violet
6.	A medicine which prom (1) Diuretic	otes secretion of urine is (2) Antipyretic	called : (3) Analgesic	(4) Sedative
7.	The antiseptic action of (1) Chlorobenzene	Dettol is due to (2) Chloroxylenol	(3) Chloroquine	(4) Chloramphenicol
8.	Which of the following is (1) Alizarin	s an ingrain dye ? (2) Cellition fast blue B	(3) Para red	(4) Indigo
9.	Which of the following is (1) Congo red	s a direct dye ? (2) Martius yellow	(3) Phenolphthalein	(4) Both (1) and (2)
10.	Which of the following is (1) orange-l	s an azo dye ? (2) Malachite green	(3) Indigo	(4) Martius yellow
11.	Dyes which are prepare (1) Direct dyes	ed right on the fabric duri (2) Azo dyes	ng dyeing process are ca (3) Disperse dyes	alled : (4) Basic dyes
12.	Which one is an acidic ((1) Methyl orange	dye ? (2) Congo red	(3) Orange-I	(4) All the three
13.	A dye which is obtained (1) Indigo	l from a largely grown pla (2) Turmeric	ant in india is (3) Malachite green	(4) Martius yellow
14.	Which of the following is (1) Congo red	s a disperse dye ? (2) Alizarin	(3) Butter yellow	(4) Celliton fast pink B
15.	A composite solid prope (1) N_2O_4 + acryclic rubb (3) Polyurethane + amn	ellant is er nonium perchloride	(2) N_2O_4 + monomethyll (4) Nirocellulose + nitro	hydrazine (MMH) glycerine
16.	The PSLV rocket used (1) Only solid propellan (3) Only biliquid propella	ts ants	(2) Only monoliquid pro(4) Both solid and biliquid	pellants id propellants
17.	Octane number is zero (1) Isoheptane	for - (2) n-heptane	(3) Isooctane	(4) n-octane

18.	Petroleum is obtained fr (1) Fischer-tropsch	rom water gas, name of t (2) Bergius	the reaction involved is - (3) Dow's	(4) Kjeldahl's	
19.	Which of the following represents a biliquid propellant ? (1) Liquid N_2O_4 + unsymmetrical dimethylhydrazine (UDMH) (2) Liquid N_2O_4 + acryclic rubber (3) Nitroglycerine + nitrocellulose (4) Polybutadiene + ammonium perchlorate				
20.	Which of the following r (1) Nitromethane (3) N_2O_4 + monomethyll	epresents a double base nydrazine	e propellant ? (2) Nitrocellulose + nitro (4) Liquid H ₂ + liquid O ₂	oglycerine	
Section	on (B) : Nucleic Aci	ds and Lipids			
1.	The sugar present in DI (1) Glucose	NA is : (2) Deoxyribose	(3) Ribose	(4) Fructose	
2.	The pentose sugar in D (1) Open chain structure (3) Furanose structure	NA and RNA has the : e	(2) Pyranose structure(4) None of the above		
3.	Which of the following is (1) Uracil	s not a pyrimidine base ? (2) Guanine	(3) Cytosine	(4) Thymine	
4.	Which of the following s (1) It has a single strand (3) It does not contain a	tatements about RNA is d iny pyridimine base	not correct ? (2) It does not undergo (4) It controls the synthe	replication esis of proteins	
5.	Oils and fats are esters (1) Ethanol	of higher fatty acids with (2) Glycol	: (3) Glycerol	(4) Methanol	
6.	The cheif constituents of (1) Simple triglycerides	of cell membranes are : (2) Waxes	(3) Phospholipids	(4) Proteins	
7.	The fats present in the l (1) Food storage only (3) Shock absorber only	body act as /	(2) Heat insulator only(4) All the three above		
8.	The most concentrated (1) Fats	source of energy in the h (2) Sugars	numan body is (3) Proteins	(4) Nuclei acids	
Section	on (C):Enzymes a	nd Hormones			
1.	Enzymes are (1) Carbohydrates	(2) Nucleic acids	(3) Globular proteins	(4) Fibrous proteins	
2.	Mark the wrong statement about enzymes ? (1) Enzymes are biological catalysts. (2) Each enzyme can catalyse a number of similar reactions. (3) Enzymes are very efficient catalysts. (4) Enzymes are needed only in very small amounts for their action.				
3.	The disease phenyl ket (1) Phenylalanine hydro (3) Lysine	one urea is caused by th oxylase	e deficiency of (2) Vitamin A (4) Leucine		
4.	Enzyme trypsin coverts (1) amino acids into pro (3) starch into sugar	: teins	(2) glucose into glycoge(4) proteins into amino a	en acids	

5.	The disease albinism is (1) Phenlalanine hydro: (3) Emulsin	s caused by the deficienc xylase	y of (2) Tyrosinase (4) Lactase	
6.	The first hormone to be (1) Insulin	e isolated and also the firs (2) Testosterone	st to be synthesized in th (3) Cortisone	e laboratory was (4) Adrenaline
7.	Which of the following i (1) Progesterone	s a male sex hormone ? (2) Estrone	(3) Epinephrine	(4) Testosterone
8.	The sex hormone which (1) Cortisone	h controls the developme (2) Thyroxine	ent and maintanance of p (3) Progesterone	regnancy is (4) Estrone
9.	Insulin is a : (1) Steroid hormone	(2) Peptide hormone	(3) Amine hormone	(4) None of the above
10.	Saliva contains (1) Amylases or ptyalin	s (2) Trypsin	(3) Blue fluid	(4) Vitamins
Section	on (D) : Vitamins			
1.	Which of the following i (1) Glucose	s a vitamin ? (2) Keratin	(3) Maltose	(4) Riboflavin
2.	The best source of vita (1) Oranges	min A is : (2) Beans	(3) Carrots	(4) Wheat
3.	Vitamin D is called : (1) Ascorbic acid (3) Thaimine		(2) Calciferol or ergoca (4) Riboflavin	lciferol
4.	Which of the following i (1) Vitamin C	s found in cod-liver oil ? (2) Vitamin E	(3) Vitamin A	(4) Vitamin B ₁
5.	Vitamin E is also called (1) Cyanocobalamin	: (2) Tocopherol	(3) Lactoflavin	(4) Ascorbic acid
6.	The best source of vita (1) Code liver oil	min C is : (2) Egg yolk	(3) Citrus fruits	(4) Fish liver oil
7.	Nervousness anaemia (1) B ₁	is caused by the deficien (2) B ₂	cy of vitamin (3) B ₆	(4) B ₁₂
8.	Deficiency of vitamin E (1) Scurvy (3) Loss of sexual powe	causes er and reproduction	(2) Loss of appetite (4) Beriberi	
9.	Which of the following i (1) Vitamin A	s fat soluble vitamin ? (2) Pyridoxine	(3) Riboflavin	(4) Thiamine
10.	Identify the vitamin who (1) vitamin A	ose deficiency in our food (2) vitamin C	l decreases reproductive (3) vitamin D	power : (4) vitamin E
11.	Beri-beri is casued due (1) vitamin A	to : (2) vitamin B	(3) vitamin C	(4) vitamin D

Section (E) : Dipole Moment









(2) H C = C H

NO.

(4) Not applicable to any single isomer





Section (F) : Boiling point



3. The correct boiling point order is :

4.

6.



5. Which property of organic compound decreases boiling point.
(1) Increase in length of hydrocarbon chain
(2) Increase in H-bonding
(3) Increase in molecular weight
(4) Decrease in size of halogen

Decreasing order of boiling point of I - IV follows. OCH, OPr OEt OEt CH₃-CH-OEt CH₃-CH-OCH₃ CH₂-OEt CH₃-CH-Br Ш Ш IV Т (1) | > || > || > |V(2) | > || > |V > |||(3) IV > III > II > I (4) || > | > || > |V







(4) || > |V > ||| > |

Section (H) : Solubility in water

- 1. Which of the following has lowest solubility in water ? (1) $CH_3CH_2CH_2OH$ (2) $CH_3 - CHCH_2OH$ (3) $HOCH_2 - CH_2OH$ (4) $C_6H_5CH_2CH_2OH$ | CH_3
- 2. Correct water solubility order/s amongst the following pairs is/are :



3. Arrange the following in decreasing order of their solubility in water CH₂ CH₃ CH₂ CH₂ CH₂ CH₂ CH₂ CH₂

CH ₃ CH ₃		CH ₃ C-CH	CH_{3}
H_C=C_H		H ^{Br}	н/с-с
(1) ,	(II)	, (III) ,	(IV)
(1) $III > I > II > IV$	(2) $III > IV > I > II$	(3) $IV > III > I > II$	(4) $IV > III > II > I$

4. The correct order of solubility in water is :



8. Which of the following statement is correct about tropolone?



- (2) Tropolone has more stability and aromatic character than tropone.
- (3) Tropolone has higher dipole moment than tropone.
 - (4) Tropolone has lower boiling point than tropone.
- 9. Decreasing order of solubility of following compounds is :



10.Which carboxylic acid has maximum solubility in water ?
(1) Malonic acid(2) Succinic acid(3) Salicylic acid(4) Phthalic acid

Section (I) : POC-II



- **4.** The blood red colour in the combination test of nitrogen and sulphur in organic compound is due to the formation of :
 - (1) ferric sulpho cyanide
 - (3) ferrous sulpho cyanide

- (2) ferric acetate
- (4) ferric cyanide
- 5. In Lassaigne's test, the organic compound is fused with sodium metal as to :
 - (1) hydrolyse the compound
 - (2) form a sodium derivative
 - (3) convert nitrogen, sulphur or halogens if present into soluble ionic sodium compound
 - (4) burn the compound



ONLY ONE OPTION CORRECT TYPE

- 1. Which of the following statements is not correct.
 - (1) Some antiseptics can be added to soaps.
 - (2) Dilute solutions of some disinfectants can be used as antiseptic.
 - (3) Disinfectants are antimicrobial drugs.
 - (4) Antiseptic medicines can be ingested.

2	 Which is the correct statement about birth control pills ? (1) Contains estrogen only (2) Contain progesterone only (3) Contain a mixture of estrogen and progesterone derivatives. (4) Progesterone enhances ovulation. 			
3.	Which statement about aspirin is not true(1) Aspirin belongs to narcotic analgesics.(3) It has antiblood clotting action.	(2) It is effective in relieving pain.(4) It is a neurologically active drug.		
4	The most useful classification of drugs for r (1) on the basis of chemical structure. (3) on the basis of molecular targets.	nedicinal chemists is (2) on the basis of drug action. (4) on the basis of pharmacological effect.		
5.	 Which of the following statements is correct (1) Some tranquilisers function by inhibit noradrenaline. (2) Tranquilisers are narcotic drugs. (3) Transquilisers are chemical compound receptor. (4) Tranquilisers are chemical compounds and a statement of the statement o	? biting the enzymes which catalyse the degradation of ds that do not affect the message transfer from nerve to hat can relieve pain and fever.		
6.	Salvarsan is arsenic containing drug which (1) syphilis (2) typhoid	was first used for the treatment of (3) meningitis (4) dysentry		
7	A narrow spectrum antibiotic is active again (1) gram positive or gram negative bacteria (3) single organism or one disease.	st (2) gram negative bacteria only. (4) both gram positive and gram negative bacteria.		
8.	The compound that causes general antidep class of (1) analgesics (2) tranguilizers	(3) narcotic analgesics (4) antihistamines		
9	Compound which is added to soap to impar (1) sodium laurylsulphate (3) resin	t antiseptic properties is (2) sodium dodecylbenzenesulphonate (4) bithional		
10.	Equanil is (1) artificial sweetener (3) antihistamine	(2) tranquilizer (4) antifertility drug		
11	Which of the following enhances leathering (1) Sodium carbonate (2) Sodium rosinat	property of soap? e (3) Sodium stearate (4) Trisodium phosphate		
12.	Glycerol is added to soap. It functions(1) as a filler.(2)(3) to prevent rapid drying.	to increase leathering. to make soap granules.		
13	Which of the following is an example of liqu	id dishwashing detergent?		
	(1) $CH_3(CH_2)_{10}$ — CH_2OSO_3 -Na ⁺ (2)	$C_{9}H_{19} \longrightarrow O + CH_2 - CH_2 - O + CH_2 CH_2OH$		
	(3) CH₃SO₃⁻Na⁺ (4)	$\begin{bmatrix} CH_{3} \\ \\ CH_{3}(CH_{2})_{15} - N - CH_{3} \\ \\ CH_{3} \end{bmatrix}^{+} Br^{-}$		

14.	Polyethyleneglycols are used (1) Cationic detergents (3) Non-ionic detergents	in the preparation	of which type of deterge (2) Anionic detergents (4) Soaps	ents?
15	Which of the following is not a (1) Carbohydrates (2) L	a target molecule f pids	or drug function in body? (3) Vitamins	(4) Proteins
16.	Which of the following statem (1) Inhibit the catalytic activity (2) Prevent the binding of sub (3) Generally a strong covale (4) Inhibitors can be competit	ents is not true ab of the enzyme. strate. nt bond is formed ive or non-compet	out enzyme inhibitors? between an inhibitor and itive.	an enzyme.
17	Which of the following chem and does not provide calories (1) Sucrose (2) G	icals can be adde ? lucose	ed for sweetening of foo (3) Aspartame	d items at cooking temperature (4) Sucrolose
18	Which of the following will not (1) Minerals (2) A	enhance nutrition	al value of food? s (3) Vitamins	(4) Aminoacids
19.	Which of the following statem (1) Majority of receptor protein (2) The active site of receptor (3) Chemical messengers are (4) Shape of receptor doesn't	ents are incorrect ns are embedded proteins opens or received at the bi change during att	about receptor proteins? in the cell membranes. In the inside region of the inding sites of receptor p rachment of messenge	cell. roteins.
20.	Phenacetin is used as : (1) antipyretic (2) a	ntiseptic	(3) analgesic	(4) antimalarial
21.	Which of the following is not a (1) Penicillin (2) S	an antibiotic ? ulphaguanidine	(3) Chloramphenicol	(4) None of these
22.	Which of the following is used(1) Norethindrone(2) e	l as a "morning aft hynylestradiol	er pill" ? (3) Mifepristone	(4) Bithional
23.	 Which of the following is not t (1) Tetracycline is one of the harmful micro-organism. (2) Streptomycin is highly eff (3) Penicillin has a narrow sp (4) Penicillin may be administ 	rue for antibiotics broad spectrum ective against mic pectrum and certai tered without testi	? antibiotics which is effer roorganisms which cause n persons are sensitive t ng the patients for sensit	ctive against a large number of e tuberculosis. o it. ivity to it.
24.	Which of the following gives p OH NH_2 (1) (2)	OH OH NH ₂	(3) OH NH ₂	(4) OH
25.	Which of the following is corre	ect set of physical CH ₃	properties of the geomet	rical isomers ?
		& H	C = C II	
	Dipole moment	Boiling point	Melting point	Stability
	(1) I > II $(2) II > I$	1 > 11 11 < 1	11 > 1 11 \ 1	1 > 11 11 < 1
	$\begin{array}{ccc} (2) & \Pi > \Pi \\ (3) & \Pi > \Pi \end{array}$		I > II	I > II
	(4) II > I	II > I	I > II	I > II

26. Decreasing order of boiling point of I to IV follow :

Methylacetate	Ethylacetate	Isopropylacetate	n-propylacetate
l	II	1111	IV
(1) > > > V	(2) > V > >	> (3) V > > >	(4) > > V >

- 27. Which isomeric amine has lowest boiling point ?
 (1) Primary amines
 (2) Secondary amine
 (3) Tertiary amine
 (4) Can not be predicted.
- **28.** Which of the following is correct method for separating a mixture of following compounds ?



29. A mixture of organic compounds A & B when dissolve in NaOH, A is soluble and its residue B gives positive test with Zn/NH_4CI followed by $AgNO_3 + NH_4OH$, (mulliken's barker test). Identify A & B



30. Which of the following statement is incorrect ?

33.

- (1) Dicarboxylic acids are soluble in water and in aq. $NaHCO_3$
- (2) p-nitrochlorobenzene is soluble in aq. HCl
- (3) m-chlorophenol is soluble in aqueous sodium hydroxide
- (4) Naphthalene and fumaric acid can be separated by water
- 31. Which is/are the correct method for separating a mixture of benzoic acid, p-methylaniline & phenol?

$$(1) \xrightarrow{\text{aq. NaHCO}_3} \xrightarrow{\text{aq. NaOH}} (2) \xrightarrow{\text{aq. HCI}} \xrightarrow{\text{H}_2 O}$$

$$(3) \xrightarrow{\text{aq. NaOH}} \xrightarrow{\text{aq. NaHCO}_3} (4) \xrightarrow{\text{aq. NaOH}} \xrightarrow{\text{aq. HCI}}$$

32. The order in which the reagent must be used to separate the compound I - IV is :







1.	Aspirin is an acetylatio		[AIPM I 1998]		
	(1) ortho-hydroxybenzoic acid(3) method-hydroxybenzoic acid		(2) ortho-hydroxybenz	(2) ortho-hydroxybenzene (4) para-dihydroxybenzene	
			(4) para-dihydroxyber		
2.	Gammexane is : (1) chlorobenzene	(2) benzyl chloride	(3) bromobenzene	(4) benzene	[AIPMT 1999] hexachloride
3.	n-propyl alcohol and isopropyl alcohol can be cher (1) PCI ₅ (3) oxidation with potassium dichromate		emically distinguished by (2) reduction (4) ozonolysis	which reagent :	[AIPMT 2002]

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4.	Soaps can be classified (1) carbohydrates	d as : (2) ethers	(3) salts of fatty acids	(4) none of the	[AIPMT-2003] ese
5.	Which of the following atmosphere?	g is responsible for de	pletion of the ozone la	yer in the upp	er strata of the [AIPMT 2004]
	(1) Polyhalogens	(2) Ferrocenes	(3) Fullerenes	(4) Freons	
6.	The correct statement i (1) functions as a catal (2) maintains blood sug (3) act as an oxygen ca (4) forms antibodies an	n respect of protein haer yst for biological reaction gar level arrier in the blood d offers resistance to dis	moglobin is that it : is seases		[AIPMT 2004]
7.	Green chemisty means (1) produce colour durin (2) reduce the use and (3) are related to the de (4) study the reactions	such reactions which ng reactions production of hazardous pletion of ozone layer in plants	chemicals	[AIP	MT (Pre) 2008]
8.	Which one of the follow (1) Equanil	ring is employed as a tra (2) Naproxen	nquilizer ? (3) Tetracycline	[AIP] (4) Chlorphen	MT (Pre) 2009] iinamine
9.	Which one of the follow (1) Promethazine	ring is employed as a Tra (2) Valium	anquilizer drug? (3) Naproxen	[AIP] (4) Mifepristor	MT (Pre) 2010] ne.
10.	Which one of the follow	ring is present as an activ	ve ingredient in bleaching	g powder for ble	eaching action ?
	(1) CaOCl ₂	(2) Ca(OCI) ₂	(3) CaO ₂ Cl	[AIP (4) CaCl ₂	'MT (Pre) 2011]
11.	Which one of the follow	ving is employed as Antik	nistamine ?	ſAI	PMT (Pre) 2011]
	(1) Chloramphenicol		(2) Diphenyl hydramine))	
	(3) Norothindrone		(4) Omeprazole		
12.	Which one of the follow	ving statements regarding	g photochemical smog is	not correct ?	
				[AIP	MT (Pre) 2012]
	(1) Carbon monoxide d	oes not play any role in p	photochemical smog form	nation	
	(2) Photochemical smo	g is an oxidising agent ir	n character		
	(3) Photochemical smo(4) Photochemical smo	g is formed through phot a does not cause irritatic	tochemical reaction invol on in eves and throat.	ving solar energ	gy.
13	Chloroamphenicol is ar	ן. י	.,	ΓΔΙΡΙ	/IT (Main) 2012]
10.	(1) antifertility drug		(2) antihistaminic		[[] [] [] [] [] [] [] [] [] [] [] [] []
	(3) antiseptic and disinf	ectant	(4) antibiotic-broad spe	ctrum	
14.	Antiseptics and disinfe	ectants either kill or pr	event growth of micror	ganisms. Ident	ify which of the
	following statements is	not true. :	_	-	[NEET 2013]
	(1) Chlorine and iodine	are used as strong disin	fectants.		
	(2) Dilute solutions of E	oric acid and Hydrogen	Peroxide are strong antis	septics.	
	(3) Disinfectants harm	the living tissues.			
	(4) A 0.2 % solution of	phenol is an antiseptic w	hile 1 % solution acts as	a disinfectant.	

15.	Artificial sweetner whicl (1) Saccharine	h is stable under cold coi (2) Sucralose	nditions only is : (3) Aspartame	[AIPM] (4) Alitame	Г (main) 2014]
16.	Bithional is generally ac (1) Dryer	dded to the soaps as an a (2) Buffering agent	additive to function as a/a (3) Antiseptic	an : (4) Softener	[AIPMT 2015]
17.	Which of the following i (1) Chloromycetin	n an analgesic? (2) Novalgin	(3) Penicillin	[I (4) Streptomyci	NEET-1 2016] n
18.	Mixture of chloroxyleno (1) Analgesic	l and terpineol acts as : (2) Antiseptic	(3) Antipyretic	(4) Antibiotic	[NEET- 2017]
19.	Among the following, th (1) Chloramphenicol	e narrow spectrum antib (2) Penicillin G	iotic is : (3) Ampicillin	[NEET (4) Amoxycillin	-1- 2019]
20.	The artificial sweetner s	stable at cooking tempera	ature and does not provi	de calories is -	2- 2010]
	(1) Saccharin	(2) Aspartame	(3) Sucralose	(4) Alitame	-2- 2019]
21.	The liquefied gas that is	s used in dry cleaning ald	ong with a suitable deterg	gent is - [NEET	-2- 2019]
	(1) Water gas	(2) Petroleum gas	(3) NO ₂	(4) CO ₂	
	PART - I	I : AIIMS QUEST	ION (PREVIOUS	YEARS)	
1.	Among the following, in (1) BHC	secticide is : (2) phosphene	(3) chloral	(4) aspirin	[AIIMS 2001]
2.	The nucleic acid base h (1) thymine	naving two possible bindi (2) cytosine	ng sites is : (3) guanine	(4) adenine	[AIIMS 2004]
3.	The purine base preser (1) adenine	nt in RNA is : (2) cytosine	(3) uracil	(4) thymine	[AIIMS-2004]
4.	Which one of the follow (1) α -keratin	ing biomolecules is insol (2) Haemoglobin	uble in water? (3) Ribonuclease	(4) Adenine	[AIIMS 2005]
5.	Which of the following Tragedy"? (i) Methylamine (1) (i) and (iii)	chemicals are used to (ii) Phosgene (2) (iii) and (iv)	o manufacture methyl is (iii) Phosphine (3) (i) and (ii)	ocyanate that c (iv) Dimethylam (4) (ii) and (iv)	aused "Bhopal [AIIMS 2005] hine
6.	Tincture of iodine is : (1) aqueous solution of (3) alcoholic solution of	I ₂ I ₂ COOH	(2) solution of I_2 in aque (4) aqueous solution of	eous KI KI	[AIIMS 2006]
7.	The compound	is used as :			[AIIMS 2007]
	(1) Antiseptic	(2) Antibiotic	(3) Analgesic	(4) Pesticides	
8.	The "saponification valu (1) NH₄OH	ue" of an oil or fat is mea (2) NaOH	sured in term of (3) KOH	(4) C ₆ H ₅ OH	[AIIMS 2007]

9.	The statement which is not correct, is : (1) Chlorophyll is responsible for the synthesis of carbohydrates in plants (2) The compound formed by the addition of oxygen to haemoglobin is called oxyhaemog (3) Acetyl salicyclic is known as aspirin (4) The metal ion present in vitemin P ₁ is Mg ² t				
10.	The sweetest artificial s (1) Aspartame	ugar among the followin (2) Sucralose	g is : (3) Alitame	(4) Sucrose	[AIIMS 2009]
11.	Structural formula of Le CHCI (1) CHAsCb	wisite is : CHCI (2) CHAsCI	CHCI (3) CHAsCb	CH₂ (4) ∥ CHAsCb₂	[AIIMS 2010]
12.	Assertion : CO and NO Reason : NO has more (1) If both assertion and (2) If both assertion and (3) If Assertion is true b (4) If both assertion and	D both combine with hae affinity than CO towards d reason are true and rea d reason are true but rea ut reason is false. d reason are false.	moglobin. s haemoglobin. ason is the correct explar son is not the correct exp	nation of assertio Planation of asse	[AIIMS 2010] n. rtion.
13.	 Assertion : Bithionol is added to soap for its beautification and solidification. Reason : Bithionol is a sulpha drug. (1) If both assertion and reason are true and reason is the correct explanation of assertion. (2) If both assertion and reason are true but reason is not the correct explanation of assertiin (3) If Assertion is true but reason is false. (4) If both assertion and reason are false. 				
14.	Identify the wrong statement in the following : (1) Chlorofluorocarbons are responsible for ozone layer depletion (2) Greenhouse effect is responsible for global warming (3) Acid rain is mostly because of oxides of nitrogen and sulphur (4) Ozone layer does not permit infrared radiation from the sun to reach the earth				[AIIMS 2012]
15.	The pesticide DDT slow (1) CCl_3 -CHO and chlor (3) p, p'-Dichlorodiphen	vly changes to robenzene yldichloroethane	(2) p, p'-Dichlorodiphen (4) p, p'-Dichlorodiphen	ylethene ydichloroethene	[AIIMS 2012]
16.	Which of the following is (1) paracetamol	s used for inducing sleer (2) chloroquine	o? (3) bithional	(4) barbituric ac	[AIIMS 2012] id derivatives
17.	A broad spectrum antib (1) paracetamol	iotic is - (2) penicillin	(3) aspirin	(4) chloramphe	[AIIMS 2014] nicol
18.	Assertion : Ranitidin hypersensitivity. Reason : Both of these (1) If both assertion and (2) If both assertion and (3) If Assertion is true b (4) If both assertion and	e is used to treat h drugs are antishistamin dreason are true and rea dreason are true but rea ut reason is false. dreason are false.	ayperacidity and bromp es. ason is the correct explan son is not the correct exp	heniramine is nation of assertio planation of asse	used to treat [AIIMS 2015] n. rtion.
19	Assertion : H_3PO_4 and Reason : H_3PO_3 increa (1) If both assertion and (2) If both assertion and (3) If assertion is true b (4) If both assertion and	H ₃ PO ₃ both are present ses the solubility of fertil reason are true and rea reason are true but rea ut reason is false.	in fertilizers. izers. ason is the correct explar son is not the correct exp	nation of assertio Danation of asse	[AIIMS 2018] n. rtion.

20.

[AIIMS 2018]

Reason : Anti Histamine and antacids work on different receptors. (1) If both assertion and reason are true and reason is the correct explanation of assertion. (2) If both assertion and reason are true but reason is not the correct explanation of assertion. (3) If assertion is true but reason is false. (4) If both assertion and reason are false. 21. [AIIMS 2018] Which is incorrect (1) Novestrol — Antifertility (2) Serotonine — Tranquilizer (3) Narrow spectrum — Chloromphenicol (4) Rentac- antacid PART - III : JEE (MAIN) / AIEEE PROBLEMS (PREVIOUS YEARS) 1. Which of the following statements is true? [AIEEE-2002] (1) HF is less polar than HBr (2) absolutely pure water does not contain any ions (3) chemical bond formation takes place when forces of attraction overcome the forces fo repulsion (4) in covalency transference of electron takes place. 2. Compound A given below is -[AIEEE - 2002] OCOCH₃ COOH (1) Antiseptic (2) Antibiotic (3) Analgesic (4) Pesticide 3. An ether is more volatile than an alcohol having the same molecular formula. This is due to -[AIEEE - 2003] (1) Dipolar character of ethers (2) Alcohols having resonance structures (3) Inter-molecular hydrogen bonding in ethers (4) Inter-molecular hydrogen bonding in alcohols [AIEEE - 2003] 4. Which of the following could act as a propellant for rockets ? (1) Liquid hydrogen + liquid nitrogen (2) Liquid oxygen + liquid argon (3) Liquid hydrogen + liquid oxygen (4) Liquid nitrogen + liquid oxygen 5. Which of the following pairs of molecules will have permanent dipole moments for both members ? [AIEEE - 2003] (2) NO₂ and CO_2 (3) NO₂ and O₂ (1) SiF₄ and NO₂ (4) SiF₄ and CO₂ 6. The compound formed in the positive test for nitrogen with the Lassaigne solution of an organic compound is -[AIEEE - 2004] (1) $Fe_{1}[Fe(CN)_{e}]_{3}$ (2) Na_3 [Fe(CN)₆ (3) Fe(CN)₂ (4) Na₄[Fe(CN)₅NOS] Which one of the following has the minimum boiling point ? 7. [AIEEE - 2004] (1) n-butane (2) 1-butyne (3) 1-butene (4) Isobutene

Assertion : Anti histamine does not effect secreation of acid in stomach :

8.	Which one of the following method is neither meant for the synthesis nor for separation of amines ? [AIEEE-2005]			
	(1) Hinsberg method	(2) Hofmann method	(3) Wurtz reaction	(4) Curtius reaction
9.	Which one of the follow	ving types of drugs reduc	es fever ?	[AIEEE - 2005]
	(1) Tranquiliser	(2) Antibiotic	(3) Antipyretic	(4) Analgesic
10.	The pyrimidine bases p (1) cytosine and guanir (3) cytosine and uracil	present in DNA are ne	(2) cytosine and thymir(4) cytosine and adeni	[AIEEE-2006] ne
11.	Among the following m (1) benzene and ethar (3) KCI and water	ixtures, dipole-dipole as iol	the major interaction, is ((2) acetonitrile and ace (4) benzene and carbo	present in [AIEEE-2006] htone n tetrachloride
12.	The hydrocarbon which (1) $CH_3CH_2 C \equiv CH$ (3) $CH CH C \equiv CCH CH$	n can react with sodium i	n liquid ammonia is : (2) $CH_3CH = CHCH_3$ (4) CH CH CH C = CC	[AIEEE-2008]
13.	Which of the following I	reagents may be used to	distinguish between phe	enol and benzoic acid ? [AIEEE-2011, 4/120]
	(1) Aqueous NaOH	(2) Tollen's reagent	(3) Molisch reagent	(4) Neutral FeCl ₃
14.	Aspirin is known as : (1) Acetyl salicylic acid (3) Acetyl salicylate		(2) Phenyl salicylate (4) Methyl salicylic acio	[AIEEE-2012, 4/120]
15.	Ortho-Nitrophenol is les (1) o-Nitrophenol is mo (2) o-Nitrophenol show (3) o-Nitrophenol show (4) Melting point of o-N	ss soluble in water than p re volatile steam than the s Intramolecular H-bondi s intermolecular H-bondi itrophenol is lower than t	p- and m- Nitrophenols b ose of m- and p-isomers ing ng hose of m- and p-isome	rs.
16.	What is DDT among th	e following :		[AIEEE-2012, 4/120]
	(1) Greenhouse gas(3) Biodegradable pollu	itant	(2) A fertilizer (4) Non-biodegradable	pollutant
17.	The gas leaked from a	storage tank of the Unio	n Carbide plant in Bhopa	al gas tragedy was : [JEE(Main)-2013, 4/120]
	(1) Methylisocyanate	(2) Methylamine	(3) Ammonia	(4) Phosgene
18.	Which one of the follow (1) Quinoline	ving base is not present i (2) Adenine	n DNA ? (3) Cytosine	[JEE (Mains)-2014, 4/120] (4) Thymine
19.	Which of the following ((1) Aluminium hydroxid (3) Phenelzine	compounds is not an ant e	tacid ? (2) Cimetidine (4) Ranitidine	[JEE (Mains)-2015, 4/120]
20.	Which of the vitamins g (1) Vitamin C	iven below is water solu (2) Vitamin D	ble ? (3) Vitamin E	[JEE (Mains)-2015, 4/120] (4) Vitamin K

- 21. Which of the following is an anionic detergent ? (1) Sodium lauryl sulphate (2) Cetyltrimethyl ammonium bromide (3) Glyceryl oleate (4) Sodium stearate 22. The correct match between item-I and item-II [JEE (Mains)-2019, 4/120] Item-I Item-II (drug) (test) (A) Chloroxylenol (P) Carbylamine test (B) Norethindrone Sodium hydrogencarbonate test (Q) (C) Sulphapyridine (R) Ferric chloride test (D) Penicillin Baver's test (S) (1) $A \rightarrow Q$, $B \rightarrow P$, $C \rightarrow S$, $D \rightarrow R$ (2) $A \rightarrow Q$, $B \rightarrow S$, $C \rightarrow P$, $D \rightarrow R$ (3) $A \rightarrow R, B \rightarrow S, C \rightarrow P, D \rightarrow Q$ (4) $A \rightarrow R, B \rightarrow P, C \rightarrow S, D \rightarrow Q$ 23. The correct match between item (I) and item (ii) is: Item - I Item – II (A) Norethindrone (P) Anti-biotic (B) Ofloxacin (Q) Anti-Fertility (C) Equanil (R) Hypertension (S) Analgesics
 - (1) (A) \rightarrow (Q); (B) \rightarrow (R); (C) \rightarrow (S)
 - (3) (A) \rightarrow (Q); (B) \rightarrow (P); (C) \rightarrow (R)
 - The correct match between Item I and Item II is : 24.

[JEE (Mains)-2019, 4/120]

	Item I	Item II				
(A)	Allosteric effect	(P)	Molecule binding to the active site of enzyme			
(B)	competitive inhibitor	(Q)	Molecule crucial for communication in the body			
(C)	Receptor	(R)	Molecule binding to a site other than the active site of enzyme			
(D)	Poison	(S)	Molecule binding to the enzyme covalently			

 $(1) (A) \rightarrow (P); (B) \rightarrow (R); (C) \rightarrow (Q); (D) \rightarrow (S) \quad (2) (A) \rightarrow (R); (B) \rightarrow (P); (C) \rightarrow (S); (D) \rightarrow (Q)$

 $(3) (A) \rightarrow (P); (B) \rightarrow (R); (C) \rightarrow (S); (D) \rightarrow (Q) \quad (4) (A) \rightarrow (R); (B) \rightarrow (P); (C) \rightarrow (Q); (D) \rightarrow (S)$

[JEE (Mains)-2016, 4/120]

[JEE (Mains)-2019, 4/120]

- (2) (A) \rightarrow (R); (B) \rightarrow (P); (C) \rightarrow (S)
- (4) (A) \rightarrow (R); (B) \rightarrow (P); (C) \rightarrow (R)

Answers														
EXERCISE - 1														
SECT	ION (A)													
1.	(3)	2.	(4)	3.	(2)	4.	(2)	5.	(3)	6.	(1)	7.	(2)	
8.	(3)	9.	(4)	10.	(1)	11.	(2)	12.	(4)	13.	(1)	14.	(4)	
15. 0 C C T	(3)	16.	(4)	17.	(2)	18.	(1)	19.	(1)	20.	(2)			
SECT		2	(2)	2	(2)	4	(2)	5	(2)	e	(2)	7	(1)	
ו. 8	(2) (1)	۷.	(3)	з.	(2)	4.	(3)	5.	(3)	0.	(3)	7.	(4)	
SECT														
1.	(3)	2.	(2)	3.	(1)	4.	(4)	5.	(2)	6.	(1)	7.	(4)	
8.	(3)	9.	(2)	10.	(1)						~ /			
SECTION (D)														
1.	(4)	2.	(3)	3.	(2)	4.	(3)	5.	(2)	6.	(3)	7.	(4)	
8.	(3)	9.	(1)	10.	(4)	11.	(2)							
		2	(2)	3	(3)	1	(3)	5	(1)	6	(3)	7	(1)	
8.	(4)	2. 9.	(2)	10.	(3)	7.	(5)	5.	(1)	0.	(3)	1.	(4)	
SECT	ION (F)	•	(0)		(0)									
1.	(3)	2.	(4)	3.	(2)	4.	(4)	5.	(4)	6.	(1)	7.	(3)	
SECT	ION (G)													
1.	(3)	2.	(2)	3.	(3)	4.	(4)	5.	(1)	6.	(4)	7.	(4)	
8. (2) 9. (1)														
SEC II		2	(A)	3	(3)	4	(1)	5	(3)	6	(A)	7	(3)	
ו. 8	(4)	2. 9	(4)	3. 10	(3)	4.	(1)	Э.	(3)	0.	(4)	7.	(3)	
SECT		0.	(2)	10.	(1)									
1.	(2)	2.	(3)	3.	(1)	4.	(1)	5.	(3)	6.	(1)	7.	(1)	
8.	(3)													
						EXER	CISE	- 2						
1.	(4)	2	(3)	3.	(1)	4	(3)	5.	(1)	6.	(1)	7	(1)	
δ. 15	(2)	9	(4)	10.	(2)	11 10	(2)	12.	(3)	13	(2)	14. 21	(3)	
22	(3)	23	(3)	24	(4)	25	(2)	26	(2,4)	20. 27	(1)	21.	(2)	
29.	(1)	30.	(2)	31.	(1)	32.	(3)	33.	(2)	34.	(2)	35.	(1)	
36.	(2)	37.	(1)	38.	(3)	39.	(4)	40.	(4)	41.	(1)	42.	(3)	
43.	(2)	44.	(4)	45.	(4)	46.	(1)	47.	(1)	48.	(1)	49.	(2)	
50.	(3)													
						EXER	CISE	- 3						
	<i>(</i>))						AKI-I	_			153	_	(- :	
1.	(1)	2.	(4)	3.	(3)	4.	(3)	5.	(4)	6.	(3)	7.	(2)	
δ. 4Ε	(1)	9.	(2)	10.	(2)	11. 10	(2)	12.	(4)	13.	(4)	14.	(2)	
15.	(3)	10.	(3)	17.	(2)	10. DA		19.	(2)	20.	(3)	21.	(2)	
1	(1)	2	(4)	3	(1)	۲ <i>۴</i> 4	(1)	5	(3)	6	(3)	7	(3)	
8.	(1)	2. 9.	(4)	10.	(1)	 11.	(1)	12.	(2)	13.	(3)	14.	(3)	
15.	(4)	16.	(4)	17.	(4)	18.	(4)	19.	(3)	20.	(4)	21.	(2)	
	~ /		~ /		· /	PA	RT-ÍII	-		-	~ /		~ /	
1.	(3)	2.	(3)	3.	(4)	4.	(3)	5.	(3)	6.	(1)	7.	(4)	
8.	(3)	9.	(3)	10 .	(2)	11.	(2)	12.	(1)	13.	(4)	14.	(1)	
15.	(2)	16.	(4)	17.	(1)	18.	(1)	19.	(3)	20.	(1)	21.	(1)	
22.	(3)	23.	(3)	24.	(4)									