Full Marks: 75



## **BRAINWARE UNIVERSITY**

## Term End Examination 2021 - 22

## Programme - Bachelor of Pharmacy

## Course Name – Pharmaceutical Organic Chemistry III Course Code - BP401T

(Semester IV)

Time allotted:	1 Hee 20 M	
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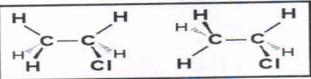
[The figure in the margin indicates full marks.]

Gro	up-A	
(Multiple Choice	e Type Question)	1 x 75=75
Choose the correct alternative from the following	ng:	
(1) Which among the following correctly defines	Diastereomer?	
<ul> <li>a) These have same magnitude but different signs of optical rotation</li> </ul>	b) Nonsuperimposable object relationship	mirror
c) These differ in all physical properties	d) Separation is very difficult	
(2) Which of the following compounds will exhib	bit cis-trans isomerism?	wary -prolo
a) 2-butene	b) 2-butyne	Library Technical
c) 2-butanol	d) butanal	pharmaces since
(3) An isomer of ethanol is:		Pharmacel coll Technology  Pharmacel coll Technology  Pharmacel coll Technology  Barasal, Sharta 7001
a) methanol	b) diethyl ether	(Par.
c) acetone	d) dimethyl ether	
(4) How many optically active stereoisomers are	possible for butane-2,3-diol?	
a) 1	b) 2	
c) 3	d) 4	
(5) Which of the following hydrocarbons does no	ot have isomers?	
a) C <sub>7</sub> H <sub>16</sub>	b) C <sub>6</sub> H <sub>14</sub>	
c) $C_5H_{10}$	d) C <sub>3</sub> H <sub>8</sub>	
(6) How many aromatic isomers of dibromobenz	ene exist?	
a) 2	b) 3	
c) 4	d) 6	
(7) Which of the following does NOT exhibit ged	ometric isomerism?	
a) 1-hexene	b) 2-pentene	
c) 3-hexene	d) 2-hexene	

(8) Which of the following compounds display	
a) CH <sub>2</sub> (OH)-CH <sub>2</sub> (OH)	b) CH <sub>3</sub> -CHCl-COOH
c) CH <sub>2</sub> =CHCl	d) CHCl=CHCl
(9) Which of the following compounds will be	e optically active
a) Propanoic acid	b) 3- chloropropanoic acid
c) 2- chloropropanoic acid	d) 3-chloropropene
(10) The isomers of the substance must have	
a) same chemical properties	b) same molecular weight
e) same structural formula	d) same functional group
(11) Compounds with the same molecular form called	nula but different structural formulas are
a) Alkoxides	b) Iso compounds
c) Isomers	d) Ortho compounds
(12) If position of functional group varies in ea	ach of its isomer then it is
a) position isomerism	b) functional group isomerism
c) chain isomerism	d) all of them
(13) If different functional groups are present	it is termed as
a) position isomerism	b) functional group isomerism
c) chain isomerism	d) all of them
(14) Types of structural isomerism are	
a) position isomerism	b) functional group isomerism
c) chain isomerism	d) all of them
(15) In ethane and cyclohexane which one of t more stable	the following pairs of conformations are
a) Eclipsed and chair conformations	b) Staggered and chair conformations
c) Staggered and boat conformations	d) Eclipsed and boat conformations
(16) Lactic acid shows which type of isomeris	sm?
a) Geometrical isomerism	b) Tautomerism
c) Optical isomerism	d) Metamerism
(17) Which of the following is a not a five me	embered ring?
a) Pyridine	b) Pyrrole
c) Furan	d) Thiophene
(18) Five membered rings come under which basis of chemical behavior?	category of heterocycle classification on the
a) excessive heterocycle	b) deficient heterocycle
c) equivalent heterocycle	d) Can't say about the five membered rir
(19) What is the greatest angle in pyridine rin	g?
a) 116°	b) 140°
c) 124°	d) 118°
(20) Which element is present as hetero atom	in pyridine?
a) Sulphur	b) Nitrogen
c) Oxygen	d) Sulphur and nitrogen

(21) When pyrrole is treated with acetic anhydride then the product formed is -

a) 2-Acetyl pyrrole	b) 3-Acetyl pyrrole
c) 4-Acetyl pyrrole	d) 5-Acetyl pyrrole
(22) Furan reacts with ammonia in presence of	of alumina at 400°C to give
a) Furfural	b) Furoic acid
c) Pyrrole	d) Pyridine
(23) Nitration of pyrrole is best carried out us	ing:
a) acetyl nitrate	b) concentrated nitric acid and sulphuric acid
c) nitric acid	d) ammonium nitrate
(24) Electrophilic substitution in furan usuall	y occurs at:
a) the o atom	b) the C(2) atom
c) both C(2) and C(3) atom	d) the C(3) atom
(25) Imidazole reacts with Hydrogen peroxid	e to give
a) Oxamide	b) Oxazole
c) Oxime	d) Oxalic Acid
(26) Imidazole is used as a	
a) Antihypertensive	b) Diuretic
c) Antacid	d) Antipyretic
(27) Thiazole reacts with Grignard's Reagen	t to produce
a) 2-alkyl thiazole	b) 4-alkyl thiazole
e) 5-alkyl thiazole	d) 3-alkyl thiazole
(28) Thiazole moiety is a crucial part of	
a) Vitamin A	b) Vitamin B2
c) Vitamin B1	d) Vitamin B12
(29) Boiling point of Oxazole is	
a) 89 <sup>0</sup> C	b) 69 <sup>0</sup> C
c) 29 <sup>0</sup> C	d) 109 <sup>0</sup> C
(30) Identify the chiral molecule among the	following:
a) Isopropyl alcohol	b) 2-pentanol
c) 1-bromo 3-butene	d) Isobutyl alcohol
(31) What is the relationship between	the structures shown?



a) structural isomers

b) geometric isomers

c) conformational structures

- d) optical isomers
- (32) Two isomeric forms of a saturated hydrocarbon
  - a) have the same structure

b) have different compositions of elements

	c) have the same molecular formula	d) have a different content of the isotopes hydrogen
	(33) Which one of the following compounds is	
	а) СН3СН2СН2ОН	b) CH3CH(OH)CH3
	c) CH3CH2CH2CH3	d) none of them
	(34) Meso-Tartaric acid is-	NEW CONTROL OF CONTROL
	a) sometimes optically active	b) always optically active
	c) sometimes optically inactive	d) always optically inactive
	(35) Plane polarized light is affected by	
	a) Identical molecules	b) All polemers
	c) Chiral molecule	d) All biomolecules
	(36) Alkenes show geometrical isomerism due	
	a) Asymmetry	b) Rotation around a single bond
	c) Resonance	d) restricted Rotation around a double bond
	(37) Which of the following compounds may e	exist as cis trans isomers
	a) 1-Butene	b) 2-Butene
	c) Cyclopropane	d) Acetone
	(38) Geometric isomerism is shown by	- X-10-10-10-10-10-10-10-10-10-10-10-10-10-
	a) Lactic acid	b) Maleic acid
	c) 1-Butene	d) 1,1-Dichloroethylene
	(39) The isomer of diethyl ether is	, -, - is an executification
	a) (CH3)2CHOH	b) (CH3)3C-OH
	c) C3H7OH	d) (C2H5)2CHOH
	(40) Which of the following compounds may n	
	a) CH3CH(OH)CO2H	b) CH3CH2CH(CH3)CH2OH
	c) C6H5CH2CH3	d) C6H5CHCICH3
	(41) Which one of the following objects is achi	
	a) Letter P	b) Letter F
	c) Ball	d) A pair of hand
	(42) Which of the following five membered rin	
	a) Furan	b) Thiophene
	c) Pyrrole	d) Pyridine
	(43) What is the dipole moment of the pyridine	?
	a) Zero	b) 2.2 D
	c) 1.17 D	d) 4.3 D
	(44) How many number of resonating structure	
	a) 4	b) 5
	c) 6	d) 7
ė	(45) The N-atom in Pyrrole is	
	a) Sp3 hybridized	b) Sp2 hybridized
	c) Sp hybridized	d) None of these
	(46) What is the correct order of reactivity (mos	

a) thiophene>pyrrole> furan	b) furan >pyrrole>thiophene	
c) pyrrole> furan >thiophene	d) furan >thiophene>pyrrole	
(47) Pyrrole is an extremly		
a) Strong Acid	b) Weak Base	
c) Weak Acid	d) Strong Base	
(48) Imidazole reacts with Bromine to give	_	
a) 4-tribromo imidazole	b) 2,4,5-tribromo imidazole	
c) 2-tribromo imidazole	d) None of them	
(49) Imidazole is iodinated only under alkaline c	ondition to produce	
a) 2-triiodoimidazole	b) 5-triiodoimidazole	
c) 2,4,5-triiodoimidazole	d) None of them	
(50) Boiling point of Thiazole is		
a) 117 degree C	b) 217 degree C	
c) 17 degree C	d) 77 degree C	
(51) Thiszole react with Sodamide to produce_		
a) 2-amino thiazole	b) 4-amino thiazole	
c) 5-amino thiazole	d) None of them	
(52) Oxazole is		
a) Water immiscible liquid	b) Water miscible liquid	
c) Partially soluble in water	d) None of them	
(53) Nitration of Oxazole leads to		
a) 2-Nitrooxazole	b) 4-Nitrooxazole	2.2
c) 3-Nitrooxazole	d) 5-Nitrooxazole	To the
(54) Pyridine react with ammonia and ethanol to	produce	2.0
a) 1,3-diaminopyridine	b) 2,4-dihydropyridine	20
c) 1,4-dihydropyridine	d) 1,4-dimethylpyridine	200
(55) Pyridine react with LiAlH4 to produce	=	4
a) 1,2-dihydropyridine	b) 2,4-dihydropyridine	
c) 1,4-dihydropyridine	d) None of them	
(56) All carbon atom in Quinoline are		
a) sp2 hybridized	b) sp hybridized	
c) sp3 hybridized	d) sp4 hybridized	
(57) Quinoline react with H2SO4 at 220 degree (	C to produce	
a) Quinoline-8-Sulphonic acid	b) Quinoline-4-Sulphonic acid	
c) Quinoline-2-Sulphonic acid	d) Quinoline-6-Sulphonic acid	
(58) Quinoline undergo bromination above 500 c	legree C to produce	
a) 2-bromoquinoline	b) 8-bromoquinoline	
c) 6-bromoquinoline	d) 5-bromoquinoline	
(59) Quinine is widely used as		
a) Antipyretic Drug	b) Antimalarial drug	
c) Antihypertensive Drug	d) Antitubercular Drug	
(60) Isoquinoline reacts with sodamide in presen	ce of ammonia to produce	

a) 1-aminoisoquinoline	b) 4-aminoisoquinoline
c) 6-aminoisoquinoline	d) 8-aminoisoquinoline
(61) Isoquinoline is widely used as	
a) Anaesthetic	b) Anti-inflammatory
c) Antipyretic	d) Fungicides
(62) Oxidation of isoquinoline with alkali	ne permanganate solution yields
a) Benzoic acid	b) Phthalic acid & cinchomeronic acid
c) Homophthalic acid	d) Oxalic acid
(63) All carbon and nitrogen atom in isoq	uinoline are
a) sp2 hybridized	b) sp hybridized
c) sp3 hybridized	d) sp4 hybridized
(64) Acridine react with sodamide to prod	luce
a) 2-aminoacridine	b) 4-aminoacridine
c) 6-aminoacridine	d) 9-aminoacridine
(65) Indole soluble in	
a) Cold Water	b) Hot water
c) Insoluble in water	d) None of them
(66) Indole ring is formed by	
a) Benzene and pyyrole	b) Benzene and Pyridine
c) Pyrrole&Acridine	d) Pyrrole& Pyridine
(67) Indole react with sulfuryl chloride to	produce
a) 2- chloroindole	b) 3- chloroindole
c) 4- chloroindole	d) 5- chloroindole
(68) The number of tautomers of Pyrazole	: is
a) Three	b) Two
c) Four	d) Six
(69) Oxazole used as a	
a) HIV inhibitor	b) Anti inflammatory
c) Muscle relaxant	d) All of them
(70) used as a reducing agent in cl	lemmensen reduction
a) H2SO4	b) Ammonia
c) Hydrazine	d) Amalgameted Zinc & HCl
(71) Clemmensen reduction is always don	e for base sensitive
a) Ketone Compound	b) Methylene Conpound
c) Carbonyl Compound	d) Acetylene Compound
(72) Cyclohexanone react with amalgame	ted zinc with HCL to produce
a) Cycloalkane	b) Benzene
c) O-Cresol	d) Cycloalkene
(73) Salicylaldehyde react with zinc and F	
a) Adipic Acid	b) Benzaldehyde
c) O-Cresol	d) Cycloalkane
(74) In Oppenauer oxidation alcoh	nol are oxidised much faster.



- a) Secondary
- c) Tertiary

(75) Oppenauer oxidation is used to prepare

- a) Antihypertensive drug
- c) Analgesics

- b) Primary
- d) Quaternary

in the pharmaceutical industry

- b) Antipyretic drug
- d) Anasthetic drug.

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