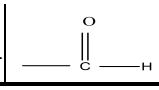
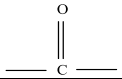
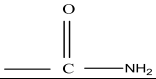
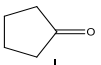
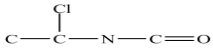
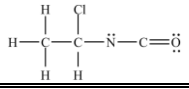
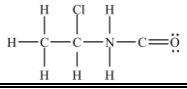
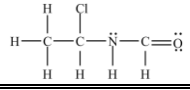
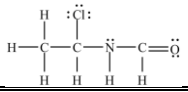
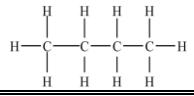
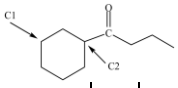
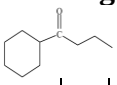
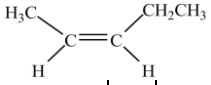
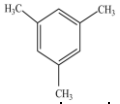
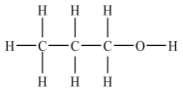
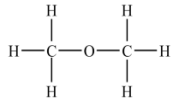
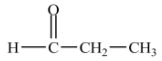
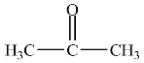
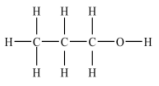
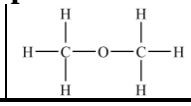
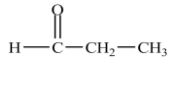
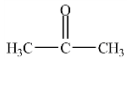
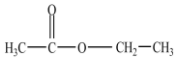
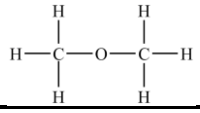
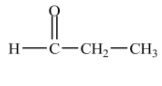
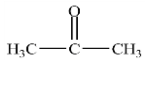
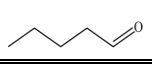
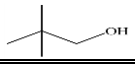
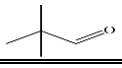
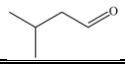
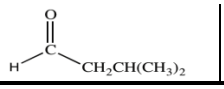
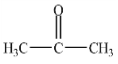
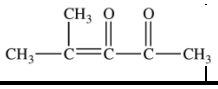
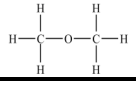
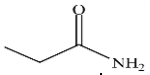
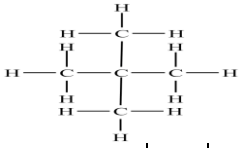
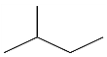
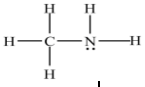
بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

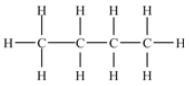
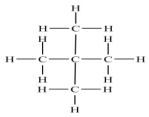
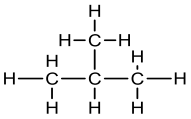
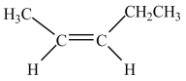
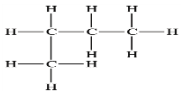
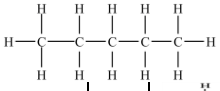
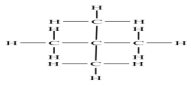
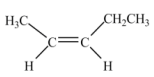
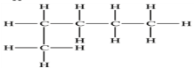
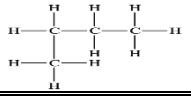
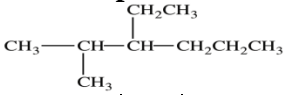
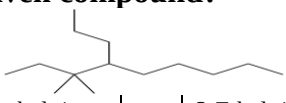
(Chem 109 Chapter 10)

Ques. no.	Question							
1	**Select the correct formula, which represent an organic compound ……**							
	A	NaCl	**B**	$BaSO_4$	**C**	HCl	**D**	C_4H_{10}
2	**How many covalent bonds does carbon generally form in organic compounds?**							
	A	2	**B**	3	**C**	4	**D**	6
3	**Select element, whichrepresents as heteroatom in organic compounds.**							
	A	C	**B**	N	**C**	H	**D**	None
4	**Identify the molecule, which have covalent bonding.**							
	A	NaCl	**B**	CH_4	**C**	Na_2CO_3	**D**	H_2O
5	**When hydrocarbons are added to water, they are**							
	A	soluble	**B**	insoluble	**C**	Partially soluble	**D**	Convert to gas
6	**Functional group '*Amide*' is:**							
	A		**B**		**C**		**D**	
7	**Identify the functional group in given organic compound, which is….** 							
	A	Carboxylic acid	**B**	Ester	**C**	Aldehyde	**D**	Ketone
8	**Functional group which represents *Alkenes* is…**							
	A	Hydroxyl group	**B**	Carbon-carbon triple bond	**C**	Carbon-carbon double bond	**D**	Aldehyde group
9	**Identify the*lone pairs electrons* in CH_3-O-CH_3 organic molecule.**							
	A	2	**B**	3	**C**	1	**D**	4
10	**Which of the following is true for element Carbon?**							
	A	Monovalent	**B**	Divalent	**C**	Trivalent	**D**	Tetravalent

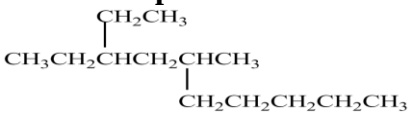
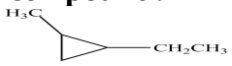
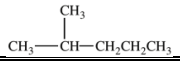
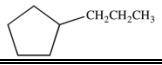
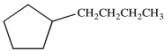
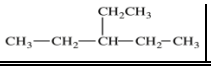
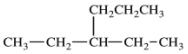
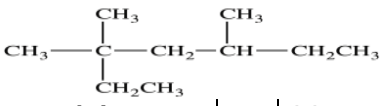
Ques. no.	Question							
11	**General molecular formula of *Alkane* is……**							
	A	C_nH_{2n-2}	**B**	C_nH_{2n+2}	**C**	C_nH_{2n}	**D**	C_nH_{2n+1}
12	**Numbers of Constitutional isomers of molecular formula C_5H_{12} are…..**							
	A	2	**B**	3	**C**	4	**D**	5
13	**Isomers are the compounds those must have same…..**							
	A	Structural formula	**B**	Chemical Properties	**C**	Molecular formula	**D**	Physical properties
14	**Which structure has all of the hydrogens and lone pairs correctly added to the compound shown below?** 							
	A 		**B** 		**C** 		**D** 	
15	**Which represents a condensed structure for a four-carbon hydrocarbon?**							
	A	$CH_3CH_2CH_2CH_3$	**B**	C_4H_{10}	**C** 		**D** 	
16	**How many H atoms are bonded to the labeled carbons in the given structure?** 							
	A	C1 has 2Hs and C2 has 2Hs	**B**	C1 has 1H and C2 has no Hs	**C**	C1 has 2Hs and C2 has 1H	**D**	C1 has 1H and C2 has 1 H
17	**How many total H atoms are present in the given organic structure?** 							
	A	12 H atoms	**B**	18 H atoms	**C**	17 H atoms	**D**	19 H atoms
18	**Classification of given hydrocarbon is as……** 							
	A	Alkyne	**B**	Alkane	**C**	Alkene	**D**	Aromatic hydrocarbon
19	**Classification of given hydrocarbon is as……** 							
	A	Alkyne	**B**	Alkane	**C**	Alkene	**D**	Aromatic hydrocarbon
20	**Select the compound which represent as an aldehyde?**							
	A 		**B** 		**C** 		**D** 	

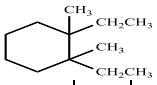
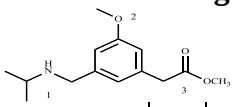
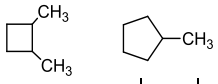
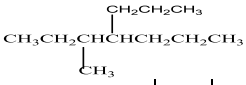
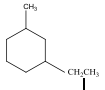
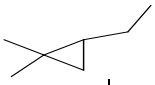
بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

Ques. no.	Question
21	**Identify the organic compound that classified as an alcohol.** **A**  **B**  **C**  **D** 
22	**Identify the organic compound that classified as an alcohol.** **A**  **B**  **C**  **D** 
23	**Identify the organic compound that classified as an alcohol.** **A** Carboxylic acid **B** Ether **C** Ester **D** Ketone
24	**The compound whose condensed structure is $(CH_3)_3CCH_2OH$ can be represented as a skeletal structure as which of the following?** **A**  **B**  **C**  **D** 
25	**Which structure is not possible?** **A**  **B**  **C**  **D** 
26	**Which formula represents an inorganic compound?** **A** $CH_3NHCH_2CH_3$ **B** $ClCH_2CH_2Cl$ **C** $CH_3CO_2CH_2CH_3$ **D** $CaCl_2$
27	**How many lone pairs of electrons are present but not shown in the molecule below?**  **A** 1 **B** 2 **C** 3 **D** 4
28	**What is the condensed formula for the molecule shown below?**  **A** $CH_3CCH_3CH_3CH_3$ **B** $(CH_3)_2(CH_2)_2CH_3$ **C** $(CH_3)_4C$ **D** 
29	**The compound given below is classified as a/an…..**  **A** Ether **B** Amine **C** Amide **D** Aldehyde
30	**How many covalent bonds does nitrogen typically form in organic compounds?** **A** 1 **B** 2 **C** 3 **D** 4

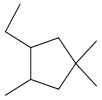
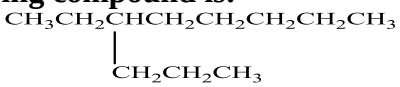
Ques. no.	Question							
31	**Which compound is most flammable?**							
	A	CH_3CH_2OH	**B**	NaCl	**C**	CO_2	**D**	HCl
32	**How many hydrogen atoms are present in a cyclic alkane with six (6) carbon atoms?**							
	A	8	**B**	10	**C**	12	**D**	14
33	**How many hydrogen atoms are present in an acyclic alkane with five (5) carbon atoms?**							
	A	8	**B**	10	**C**	12	**D**	14
34	**Identify the formula, which represents an *acyclicalkane*.**							
	A	$C_{10}H_{20}$	**B**	$C_{12}H_{26}$	**C**	$C_{10}H_{18}$	**D**	C_9H_{18}
35	**Identify the formula, which represents a *cyclic alkane*.**							
	A	$C_{11}H_{20}$	**B**	$C_{10}H_{18}$	**C**	C_9H_{20}	**D**	$C_{10}H_{20}$
36	**Which of the following compounds is identical to the one shown below?** 							
	A 		**B** 		**C** 		**D** 	
37	**What is the IUPAC name of $CH_3CH_2CH_2CH_2CH_2CH_3$?**							
	A	Hexane	**B**	Heptane	**C**	Pentane	**D**	Butane
38	**Which compound is a constitutional isomer of the one shown below?** 							
	A 		**B** 		**C** 		**D** 	
39	**What is the IUPAC name of given compound?** 							
	A	4-Propylhexane	**B**	2-Methyl-3-ethylhexane	**C**	3-Ethyl-2-methylhexane	**D**	4-Ethyl-5-methylheptane
40	**What is the IUPAC name of given compound?** 							
	A	4-Isopentylnonane	**B**	3,3-Dimethyl-4-propylnonane	**C**	3-Ethyl-4-propylnonane	**D**	3,3-Dimethyl-4-butylnonane

بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

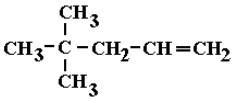
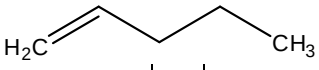
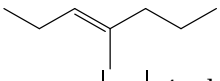
Ques. no.	Question							
41	**What is the IUPAC name of this compound?** 							
	A	3-Ethyl-5-methyldecane	**B**	3-Ethyl-5-pentylhexane	**C**	3-Ethyl-2-pentylhexane	**D**	8-Ethyl-6-methyldecane
42	**What is the IUPAC name of this compound?** 							
	A	Ethyl-2-methylcyclobutane	**B**	1-Ethyl-2-methylcyclopropane	**C**	1-Ethyl-2-methylcyclobutane	**D**	Ethyl-methyl-cyclopropane
43	**Identify the structure of 2-methylhexane, which is…..**							
	A	$(CH_3)_2CHCH_2CH_2CH_3$	**B**	$(CH_3)_3CCH_2CH_2CH_2CH_3$	**C**	$(CH_3)_2CH(CH_2)_3CH_3$	**D**	
44	**Identify the structure of 2-methylhexane, which is…..**							
	A		**B**		**C**		**D**	
45	**Which alkane has the lowest boiling point?**							
	A	Ethane	**B**	Propane	**C**	Butane	**D**	Hexane
46	**Which name is not a valid IUPAC name for an alkane?**							
	A	2,3,4-Trimethylhexane	**B**	1-Ethyl-2-butylpentane	**C**	1-Butyl-2-ethylcyclopentane	**D**	5-Butyl-2-methylnonane
47	**Which compound has the lowest melting point?**							
	A	$CH_3(CH_2)_3CH_3$	**B**	$CH_3(CH_2)_6CH_3$	**C**	$CH_3(CH_2)_5CH_3$	**D**	$CH_3(CH_2)_7CH_3$
48	**Which compound has the highest melting point?**							
	A	$CH_3(CH_2)_3CH_3$	**B**	$CH_3(CH_2)_6CH_3$	**C**	$CH_3(CH_2)_5CH_3$	**D**	$CH_3(CH_2)_7CH_3$
49	**What is the IUPAC name of this molecule?** 							
	A	2-Ethyl-2,4-dimethylhexane	**B**	2,4-Dimethyl-2-ethylhexane	**C**	3,3,5-Trimethylheptane	**D**	5-Ethyl-3,5-dimethylhexane
50	**Fill in the blank "…..... an atom or a group of atoms with characteristic chemical and physical properties".**							
	A	Hydrocarbons	**B**	Constitutional isomers	**C**	Stereoisomers	**D**	Functional group

Ques. no.	Question							
51	**Select the correct *IUPAC* name for: $(CH_3CH_2)_3CCH_2CH_2CH(CH_3)_2$**							
	A	5-Diethyl-2-methylheptane	**B**	5,5-Diethyl-2-methylheptane	**C**	2-Methyl-5,5-diethylheptane	**D**	3,3-Diethyl-6-methylheptane
52	**The IUPAC name of the following a cycloalkane is :** 							
	A	1,2-Dimethyl-1,2-diethylcyclohexane	**B**	1,1-Diethyl-2,2-dimethylcyclohexane	**C**	1,2-Diethyl-1,2-dimethylcyclohexane	**D**	1,2-Diethyl-2-dimethylcyclohexane
53	**Identify the labeled functional groups in the following compound.** 							
	A	1Amine, 2 alcohol, 3 ketone	**B**	1Amine, 2 ether, 3 ester	**C**	1Amine, 2 alcohol, 3 ester	**D**	1 Amine, 2 alcohol, 3 ether
54	**Cyclohexane represents constitutional isomer for ……**							
	A	1-Ethyl-2-pentene	**B**	3-Methyl-2-pentyne	**C**	3-Methyl-1-hexene	**D**	2-Methyl-2-pentene
55	**The following pair of compounds is classified as:** 							
	A	Constitutional isomers	**B**	stereoisomers	**C**	Identical molecules	**D**	Not isomer
56	**Which of the following structures represents *Neopentane?***							
	A	$CH_3CH_2CH_2CH_2CH_3$	**B**	$CH_3CH(CH_3)CH_2CH_3$	**C**	$H_3C-C(CH_3)_2-CH_3$	**D**	$CH_3CH(CH_3)CHCH_3$
	Organic molecule which contain hetero atom is:							
57	**A**	CH_3-CH_2-CH_2-CH_3	**B**	CH_3-O-CH_2-CH_3	**C**	CH_3-CH=CH-CH_3	**D**	CH_3-CH=CH_2
58	**IUPAC name of the following compound is:** 							
	A	4-propyl-3-methylheptane	**B**	4-propyl-5-methylheptane	**C**	3-methyl-4-propylheptane	**D**	4-ethyl-3-methylheptane
59	**The IUPAC name of the following compound is:** 							
	A	1-methyl-3-ethylcyclohexane	**B**	3-ethyl-1-methylcyclohexane	**C**	1-ethyl-3-methylcyclohexane	**D**	1-ethyl-3-methylhexane
60	**The IUPAC name of the following compound is:** 							
	A	1,1-dimethyl-2-ethylcyclopropane	**B**	1,1-diethyl-2-methylcyclopropane	**C**	1,2,3-trimethylcyclopropane	**D**	1-ethyl-2,2-dimethylcyclopropane

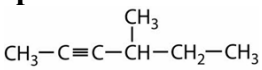
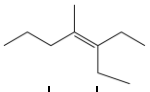
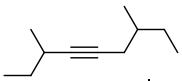
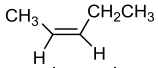
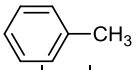
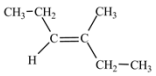
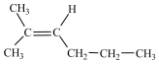
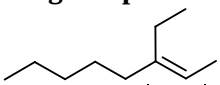
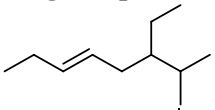
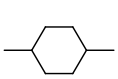
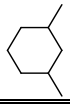
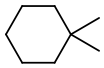
بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

Ques. no.	Question							
61	**The IUPAC name of the following compound is….** 							
	A	1-ethyl-2,4,4-trimethylcyclopentane	**B**	1-ethyl-3,3,5-trimethylcyclopentane	**C**	1,1,3-trimethyl-4-ethylcyclopentane	**D**	1,3,3-trimethyl-5-ethylcyclopentane
62	**The IUPAC name of the following compound is….** $(CH_3)_2CH\text{-}CH(CH_3)_2$							
	A	Hexane	**B**	1,1,2,2-tetramethylethane	**C**	2,3-dimethyl butane	**D**	1,4-dimethylbutane
63	**The IUPAC name of the following compound is:** 							
	A	6-ethylnonane	**B**	4-ethylnonane	**C**	3-propyloctane	**D**	6-propyloctane
64	**General molecular formula of cyclo*alknaes* is…..**							
	A	C_nH_{2n-2}	**B**	C_nH_{2n+2}	**C**	C_nH_{2n}	**D**	C_nH_{2n+1}
65	**……. is a pairs *Constitutional Isomer*.**							
	A	Butane &iso-pentane	**B**	Acetic acid & ethanol	**C**	Ethanol & dimethyl ether	**D**	Acetaldehyde & acetone
66	**Alkanes are soluble in:**							
	A	Water	**B**	Organic solvent	**C**	Inorganic solvent	**D**	None of these
67	**Alkenes and alkanes are called ……..**							
	A	Saturated hydrocarbones	**B**	Unsaturated hydrocarbones	**C**	Aromatic compounds	**D**	Carbohydrates

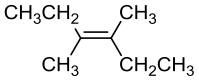
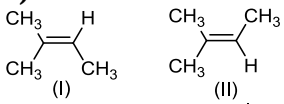
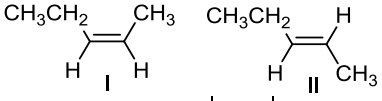
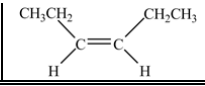
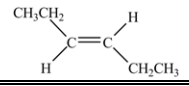
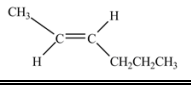
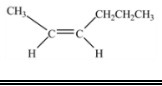
(Chem 109 Chapter 11)

Ques. no.	Question
1	**Which types of compounds are saturated hydrocarbons?** **A** Alkenes **B** Aromatic compounds **C** Alkanes **D** Alkynes
2	**Which statement is true about Unsaturated Hydrocarbons** **A** single covalent bond **B** Alkane **C** Multiplebonds (double, triple bonds) **D** All statement are correct
3	**General Molecular Formula and bond angle for Alkene is:** **A** $C_nH_{2n}$and 109° **B** C_nH_{2n+2} and 120° **C** C_nH_{2n-2} and 120° **D** C_nH_{2n} and 120°
4	**General molecular formula and bond angle for *Alkyne* are:** **A** $C_nH_{2n+2}$and 109° **B** $C_nH_{2n}$and 120° **C** C_nH_{2n-2} and 180° **D** C_nH_{2n+2} and 180°
5	**General formula $C_{20}H_{38}$ is correspond to which of the following** **A** Alkanes **B** Alkenes **C** Alkynes **D** None of this
6	**Alkene that has eleven carbons, general molecular formula is……:** **A** $C_{11}H_{24}$ **B** $C_{11}H_{23}$ **C** $C_{11}H_{22}$ **D** $C_{11}H_{21}$
7	**IUPAC name of the following compound is…….**  **A** 2,2-dimethyl-4-pentene **B** 4,4-dimethyl-1-pentene **C** 2,2-dimethyl-4-butene **D** 4,4-dimethyl-1-butene
8	**IUPAC name of following compound is…….**  **A** Pentane **B** Pentene **C** Butene **D** 4-methyl-butene
9	**IUPAC name of following compound is…….**  **A** 4-methyl-3-heptene **B** 4-methyl-4-heptene **C** 4-ethyl-3-heptene **D** 4-ethyl-4-heptene
10	**Which is the molecular formula of an alkyne?** **A** $C_{10}H_{18}$ **B** C_9H_{18} **C** C_8H_{18} **D** $C_{10}H_{20}$

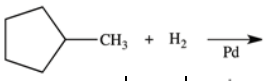
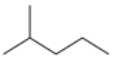
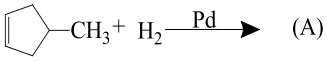
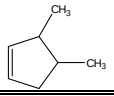
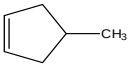
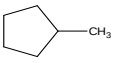
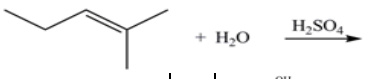
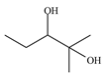
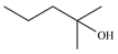
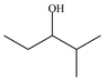
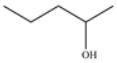
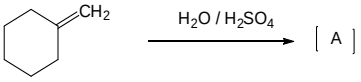
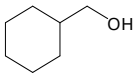
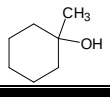
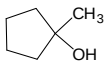
بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

Ques. no.	Question
11	**IUPAC name of following compound is…….**  **A** 4-methyl-2-hexyne **B** 4-methyl-1-hexyne **C** 4-methyl-2-pentyne **D** 4-methyl-1-pentyne
12	**What is the IUPAC name of this compound?**  **A** 5-Ethyl-4-methyl-4-heptene **B** 3-Ethyl-4-methyl-3-hexene **C** 3-Ethyl-4-methyl-4-heptene **D** 3-Ethyl-4-methyl-3-heptene
13	**IUPAC name of following compound is…….**  **A** 3,7-dimethyl-5-nonyne **B** 2-ethyl-6-methyl-3-octyne **C** 2,6-diethyl-5-nonyne **D** 3,7-dimethyl-4-nonyne
14	**What is the IUPAC name of this compound?**  **A** cis-3-Pentene **B** cis-2-Pentene **C** Ethylpropene **D** 2-ethylpentene
15	**What is the IUPAC name of this compound?**  **A** Methylbenzene **B** 2-Methyl-1,3-cyclohexadiene **C** 3-Methyl-1,3-cyclohexadiene **D** phenol
16	**What is the structure of 2-methyl-3-hexene?** **A**  **B**  **C** $(CH_3)_2C=CH(CH_2)CH_3$ **D** $(CH_3)_2CHCH=CHCH_2CH_3$
17	**Correct IUPAC name of the following compound is:**  **A** 2-ethyloctane **B** 2-ethyloctanal **C** 6-ethyl-6-octene **D** 3-ethyl-2-octene
18	**Correct IUPAC name of the following compound is:**  **A** 6-ethyl-7-methyl-3-octene **B** 7-ethyl-6-methyl-3-octene **C** 6-ethyl-7-methyloctene **D** 7-ethyl-6-methyloctene
19	**Select the correct structure for IUPAC named 1,4-dimethylcyclohexane :** **A**  **B**  **C**  **D** 
20	**What is the IUPAC name for the compound $CH_3CH=CHCH_2CH_3$?** **A** Pentene **B** 2,3-Pentene **C** 3-Pentene **D** 2-Pentene

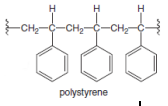
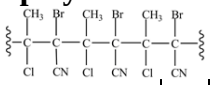
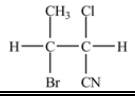
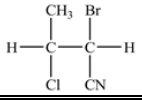
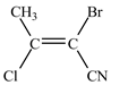
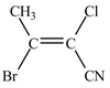
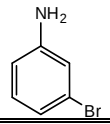
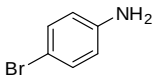
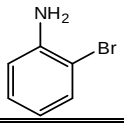
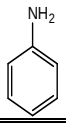
بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

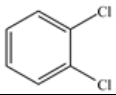
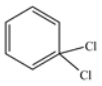
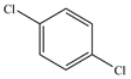
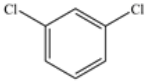
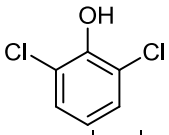
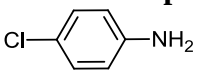
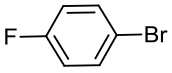
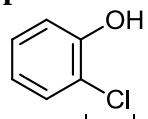
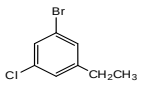
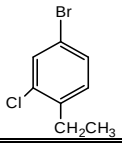
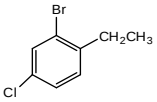
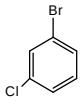
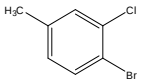
Ques. no.	Question							
21	**The compounds 1-pentene and (z) or *cis*-2-pentene are an example of a pair of**							
	A	Isotopes	**B**	Stereoisomers	**C**	Constitutional isomers	**D**	Identical molecules
22	**The molecules (*z*) or *cis*-2-pentene and (*E*) or *trans*-2-pentene are an example of a pair of**							
	A	Isotopes	**B**	Stereoisomers	**C**	Constitutional isomers	**D**	Identical molecules
23	**Which statement is true about stereoisomer in given structure:** 							
	A	D=E,and A= B	**B**	D≠ E, and A= B	**C**	D≠ E, and A≠ B	**D**	None of this
24	**Which name is correct for the given molecule below:** 							
	A	*cis*-2-methyl-3-heptene	**B**	*trans*-3,4-dimethyl-3-hexene	**C**	*cis*-5-methyl-4-heptene	**D**	*trans*-5-methyl-4-heptene
25	**Stereoisomers are isomers that differ only in the…….**							
	A	3-D arrangement of atoms	**B**	2-D arrangement of atoms	**C**	1-D arrangement of atoms	**D**	All of this
26	**Relation between (I) and (II) are:** 							
	A	Stereoisomers	**B**	Constitutional Isomers	**C**	Identical molecules	**D**	None of the above
27	**Relation between (I) and (II) molecules will be as:** 							
	A	same molecules	**B**	Constitutional isomers	**C**	Stereoisomers	**D**	All of this
28	**Which statement is true about *Polysubstituted Benzene* is:**							
	A	When Benzene ring have one substituent only	**B**	When Benzene ring have two substituent only	**C**	When Benzene ring have three or more substituent	**D**	Above all statements are true
29	**Which structure is *trans*-3-hexene?**							
	A		**B**		**C**		**D**	
30	**Which name is a valid IUPAC name of an unsaturated hydrocarbon?**							
	A	2,3-Dimethyl-3-hexyne	**B**	trans-1-Hexene	**C**	trans-3-Pentyne	**D**	2-Methyl-2-butene

بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

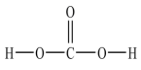
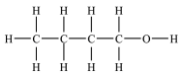
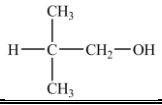
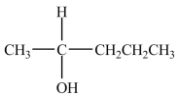
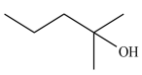
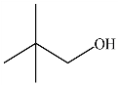
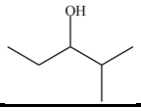
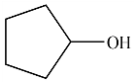
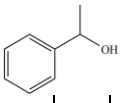
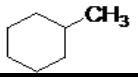
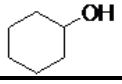
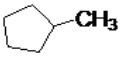
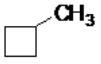
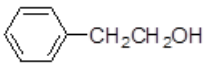
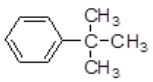
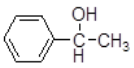
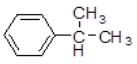
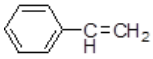
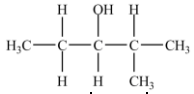
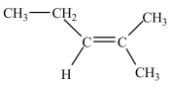
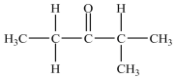
Ques. no.	Question							
31	**What is the product of the reaction 2-pentene + $H_2 \xrightarrow{Pd}$?**							
	A	Pentane	**B**	2-Pentane	**C**	Ethane+ Propane	**D**	2-Pentyne
32	**Hydrogenation of Alkene in the presence of Pd catalyst means:**							
	A	Addition of H_2 at Alkene double bond	**B**	Removing of $H_2$from Alkane	**C**	There will be no reaction	**D**	Addition of water at Alkene double bond
33	**During Hydrogenation of Alkene, which catalyst is necessary:**							
	A	H_2SO_4 as catalyst	**B**	HNO_3 as catalyst	**C**	Pd metal catalyst	**D**	HCl as catalyst
34	**During Hydration (addition of H_2O) of Alkene, which catalyst is necessary**							
	A	H_2SO_4 as catalyst	**B**	Pt metal catalyst	**C**	Pd metal catalyst	**D**	Zn as catalyst
35	**What product is formed from the reaction below?** 							
	A 		**B** 		**C** 		**D**	No reaction
36	**Product (A) in given reaction is:** 							
	A 		**B** 		**C** 		**D** 	
37	**During hydrogenation of 1-pentene in the presence of Pd catalyst, the product [A] is:**							
	A	Propane	**B**	Butane	**C**	Pentane	**D**	Hexane
38	**Which statement is correct for the hydrogenation of Alkene:**							
	A	Pd catalyst is needed and Alkene convert to Alkyne	**B**	Pd catalyst is needed and Alkene convert to Alkane	**C**	Pd catalyst is NOT needed, Alkene convert to Alkyne	**D**	Pd catalyst is NOT needed and Alkene convert to Alkane
39	**What product is formed in the hydration reaction shown below?** 							
	A 		**B** 		**C** 		**D** 	
40	**Complete the following reaction and find compound [A]:** 							
	A 		**B** 		**C** 		**D** 	

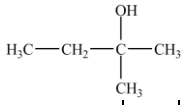
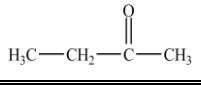
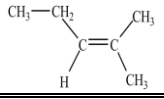
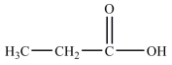
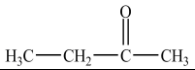
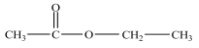
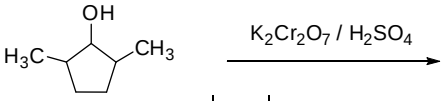
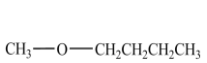
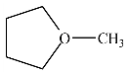
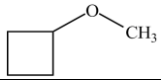
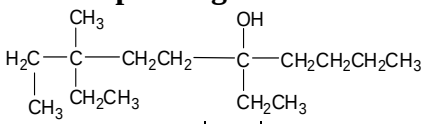
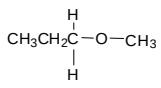
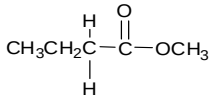
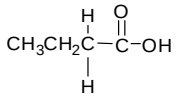
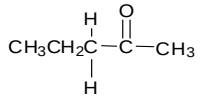
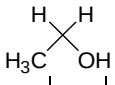
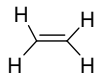
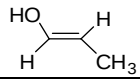
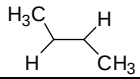
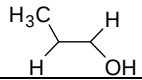
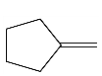
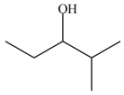
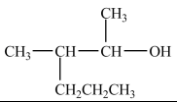
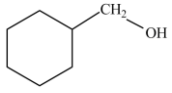
بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

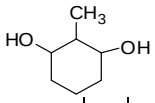
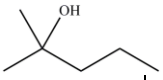
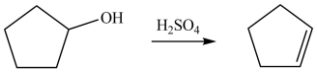
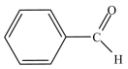
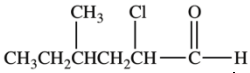
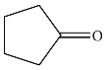
Ques. no.	Question							
41	**Which statement is correct about Polymers:**							
	A	Polymers are small molecule	**B**	Polymers are large molecules made of repeating units of monomers	**C**	Polymers made of one unit of monomers	**D**	None of the above
42	**Given below is a Polymer, the name of monomer from which it made is?** 							
	A	Methyl Benzene	**B**	Ethyl Benzene	**C**	Styrene	**D**	Propyl Benzene
43	**What monomer is used to form the polymer below?** 							
	A 		**B** 		**C** 		**D** 	
44	**Polymerization is the joining together of…….to make polymers.**							
	A	Monomer	**B**	Atoms	**C**	Compound	**D**	None of the above
45	**During polymerization of vinyl chloride, the polymer name is:**							
	A	Polyvinylacetate	**B**	Polyvinylchloride	**C**	Polystyrene	**D**	Polyethylene
46	**Benzene is…….. With three double bonds.**							
	A	Aromatic compound	**B**	Tetrahedralin shape	**C**	Linear in shape	**D**	Polar compound
47	**Which statement is true about Benzene:**							
	A	Benzene is planer molecule and have bond angle 109°	**B**	Benzene is planer molecule and have Bond angle 90°	**C**	Benzene is planer molecule and have bond angle 120°	**D**	Option (a) and (b) are correct
48	**The compounds *o*-chlorophenol and *m*-chlorophenol are examples of**							
	A	Molecules those are identical.	**B**	Molecules that are constitutional isomers	**C**	Molecules that are stereoisomers	**D**	Molecules thatare isotopes.
49	**Which structure is *m*-bromoaniline:**							
	A 		**B** 		**C** 		**D** 	
50	**Aminobenzene structure is given below which is also known as:**							
	A	Phenol	**B**	Methyl benzene	**C**	Aniline	**D**	None of the above

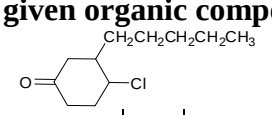
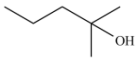
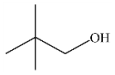
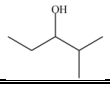
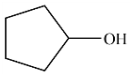
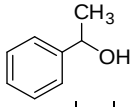
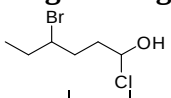
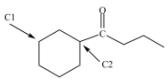
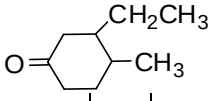
Ques. no.	Question							
51	**What is the structure of *ortho*-dichlorobenzene?**							
	A		**B**		**C**		**D**	
52	**What is the IUPAC name of the compound below?** 							
	A	1,3-Dichloro-2-oxybenzene	**B**	1,3-Dichloro-2-hydroxylbenzene	**C**	2,6-Dichlorophenol	**D**	1,5-Dichlorophenol
53	**Following benzene is disubstituted, name of compound is:** 							
	A	p-chlorotoluene	**B**	o-chlorophenol	**C**	o-chlorotoluene	**D**	p-chloroaniline
54	**Name of given compound is:** 							
	A	p-fluorobromo benzene	**B**	o-fluorobromo benzene	**C**	o-bromofluoro benzene	**D**	p-bromofluoro benzene
55	**Benzene is disubstituted, name of compound is:** 							
	A	p-chlorophenol	**B**	m-chlorophenol	**C**	o-chlorophenol	**D**	o-chlorobenzene
56	**4-bromo-2-chloro-1-ethylbenzene is :**							
	A		**B**		**C**		**D**	
57	**What is the name of Polysubstituted Benzene given below** 							
	A	2-chloro-3-bromotoluene	**B**	4-bromo-3-chloroaniline	**C**	4-bromo-5-chlorotoluene	**D**	4-bromo-3-chlorotoluene
58	**Which statement concerning the compound 1-ethylcyclohexene is false?**							
	A	It contains a ring of six carbons.	**B**	It contains one C=C bond.	**C**	It contains a two carbon substituent on the parent carbon chain	**D**	It is a saturated hydrocarbon.

(Chem 109 Chapter 12)

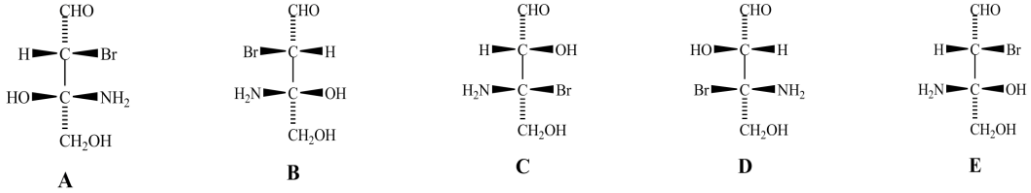
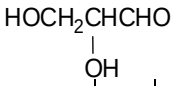
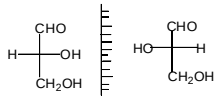
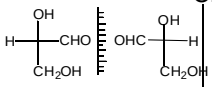
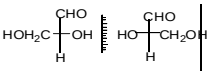
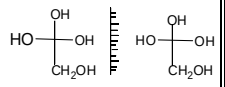
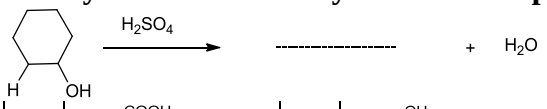
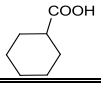
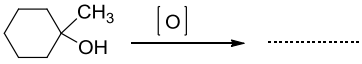
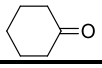
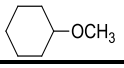
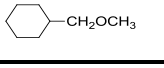
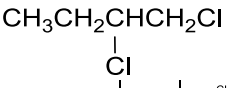
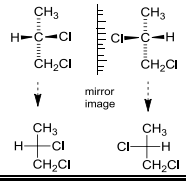
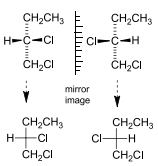
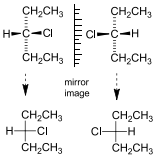
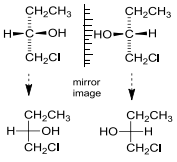
Ques. no.	Question							
1	**Identify the Alcohols functional group, which refers to…**							
	A	Carboxylate group	**B**	Hydroxyl group	**C**	Sulfhydryl group	**D**	Carbonyl group
2	**Which is a secondary alcohol?**							
	A		**B**		**C**		**D**	
3	**Identify the primary alcohol, which refers to….**							
	A		**B**		**C**		**D**	
4	**Classify the given compound as the type of alcohol which refers to…** 							
	A	Secondary alcohol	**B**	Primary alcohol	**C**	Tertiary alcohol	**D**	None of the above
5	**What is the shape around the oxygen atom in an alcohol?**							
	A	Tetrahedral bond angle of 109.5°(bent shape)	**B**	Trigonal pyramidal	**C**	Trigonal planar	**D**	None of the above
6	**Which alcohol is most soluble in water?**							
	A	$(CH_3)_2CHCH_2OH$	**B**	$CH_3(CH_2)_6OH$	**C**	$CH_3(CH_2)_{11}OH$	**D**	All of the above
7	**Compound which has the higher boiling point is……**							
	A		**B**		**C**		**D**	
8	**What is the major product of the dehydration of the compound given below?** 							
	A		**B**		**C**		**D**	
9	**Identify the commonly used reagent for alcohol dehydration.**							
	A	$K_2Cr_2O_7$	**B**	H_2SO_4	**C**	Cl_2	**D**	H_2O
10	**What is/are the carbonyl product(s) formed when the alcohol given below is oxidized with $K_2Cr_2O_7$ / H_2SO_4?** 							
	A	$CH_3(CH_2)_4COOH$	**B**		**C**		**D**	No reaction

Ques. no.	Question
11	**What is/are the carbonyl product(s) formed when the alcohol given below is oxidized with $K_2Cr_2O_7$ / H_2SO_4?**  **A**  **B**  **C**  **D** No reaction
12	**Identify the correct compound with functional group of ether.** **A**  **B**  **C**  **D** None of the above
13	**Chemical reaction as shown below, identify the final product.**  **A** 2,5-dimethylcyclo pentanol **B** 2,5-dimethyl cyclopentanone **C** 2,5-dimethyl cyclopentanal **D** 2,5-dimethyl cyclopentane
14	**Identify the compound which has the highest boiling point.** **A** $CH_3(CH_2)_4CH_2OH$ **B** $CH_3(CH_2)_2O(CH_2)_2CH_3$ **C** $CH_3(CH_2)_5CH_3$ **D** None of this
15	**What is the common name of $CH_3(CH_2)_2–O–(CH_2)_2CH_3$** **A** Diethyl ether **B** Butyl butyl ether **C** Dipropyl ether **D** Ethylmethyl ether
16	**What is the structure of Butylmethylether?** **A**  **B**  **C**  **D** 
17	**What is the IUPAC name of the compound given below?**  **A** 3,6-Diethyl-3-methyl-8-decanol **B** 3,6-Diethyl-3-methyl-8-decanol **C** 5,8-Diethyl-8-methyl-5-decanol **D** 3-Butyl-6-ethyl-6-methyl-3-octanol
18	**Identify the product when $CH_3CH_2CH_2CH_2–OH$ is oxidize** **A**  **B**  **C**  **D** 
19	**What will be the product when ethanol is dehydration by conc. H_2SO_4….**  **A**  **B**  **C**  **D** 
20	**Which compound can oxidize and finally convert to a carboxylic acid?** **A**  **B**  **C**  **D** 

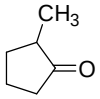
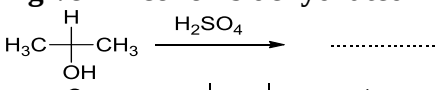
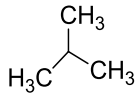
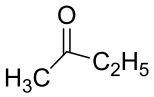
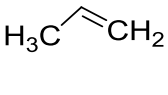
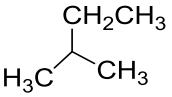
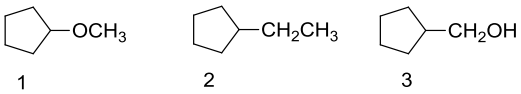
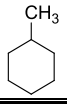
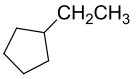
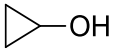
Ques. no.	Question							
21	**What is the IUPAC name of the compound below?** 							
	A	2-Methylcyclo hexane-1,3-diol	**B**	2-Methyl-3-hydroxyphenol	**C**	2,6-dihydroxy toluene	**D**	1-Methyl-2,6-cyclohexanediol
22	**Which statement is incorrect for the following given organic compound?** 							
	A	It is a tertiary alcohol	**B**	Its name is 2-methyl-2-pentanol	**C**	Its molecular formula is $C_6H_{14}O$	**D**	It can be oxidized to give a ketone
23	**Choose the correct statement for the following chemical reaction.** 							
	A	An H atom and an OH group have been removed from the reactant	**B**	The OH group was removed from the reactant	**C**	The OH group was replaced by an H atom	**D**	Two H atoms were removed from the reactant
24	**Which of the following represents the general condensed formula for an aldehyde?**							
	A	RCOOH	**B**	RCHO	**C**	RCOR	**D**	RCH_2OH
25	**What is the common name of the compound shown below?** 							
	A	HydroxyBenzene	**B**	Acetaldehyde	**C**	Phenol	**D**	Benzaldehyde
26	**What is the IUPAC name of the compound shown below?** 							
	A	5-Chloro-3-methylhexanal	**B**	3-Chloro-5-methylhexanone	**C**	2-Chloro-4-methylhexanal	**D**	2-Chloro-4-methylhexanone
27	**What is the IUPAC name of the compound shown below?** 							
	A	2-Pentanone	**B**	Cyclopentanone	**C**	Cyclopropanone	**D**	Cyclobutanone
28	**Identify the organic compound, which has highest boiling point.**							
	A	$CH_3(CH_2)_5CH_3$	**B**	$CH_3(CH_2)_4CHO$	**C**	$CH_3(CH_2)_4CH_2OH$	**D**	CH_3CH_2OH
29	**Which compound is highly miscible in water?**							
	A	$CH_3(CH_2)_5CHO$	**B**	$CH_3(CH_2)_4COCH_2CH_3$	**C**	CH_3CH_2CHO	**D**	$CH_3CH_2CH_3$
30	**Which compound is soluble in heptane, but not soluble in water?**							
	A	$(CH_3)_2CH(CH_2)_5CHO$	**B**	$CH_3CH_2CH_3$	**C**	CH_3CH_2CHO	**D**	None of the above

Ques. no.	Question							
31	**Identify the Tollens reagent, which is…**							
	A	$K_2Cr_2O_7$	**B**	H_2SO_4	**C**	Ag_2O in aqueous NH_4OH	**D**	Cl_2
32	**Which compound(s) would give a positive Tollens reagent test?**							
	A	Alcohols	**B**	Aldehydes	**C**	Ketones	**D**	Ethers
33	**What is the product of the reduction of an aldehyde?**							
	A	Primary alcohols	**B**	Ketones	**C**	Carboxylic acids	**D**	Amines
34	**What is the IUPAC name of the given organic compound?** 							
	A	4-Chloro-3-pentylcycloheptanone ne	**B**	1-Chloro-2-pentyl-4-cyclohexanone	**C**	4-Chloro-3-pentylcyclohexanone	**D**	4-Chloro-3-pentylhexanone
35	**Which statement is true about organic compounds when refer as Isomers?**							
	A	They differ in the way that atoms are connected to one another	**B**	They have different functional groups	**C**	They have the same molecular formula but the different structures	**D**	All of the above statements are correct
36	**Which molecule is chiral?**							
	A 		**B** 		**C** 		**D** 	
37	**Identify number of Chirality Centers in given organic compound.** 							
	A	1	**B**	2	**C**	3	**D**	4
38	**Identify number of *Chirality Centers* in given organic compound.** 							
	A	1	**B**	2	**C**	3	**D**	4
39	**Identify the Chirality Centers at labelled carbon C1 and C2** 							
	A	C1 is a chirality center and C2 is not a chirality center	**B**	C1 is not a chirality center and C2 is a chirality center	**C**	C1 and C2 are both chirality centers	**D**	Neither C1 nor C2 are chirality centers
40	**How many Chirality Centers are present in the compound given below?** 							
	A	2	**B**	3	**C**	4	**D**	5

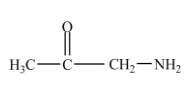
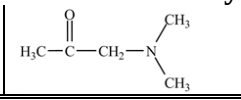
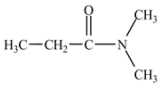
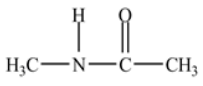
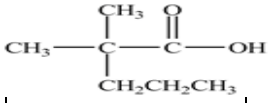
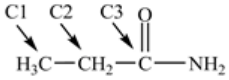
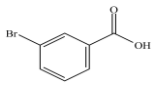
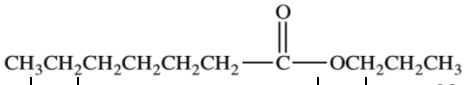
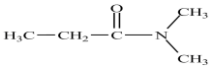
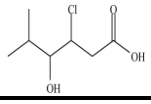
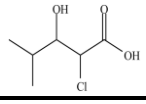
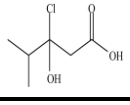
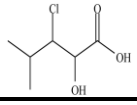
بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

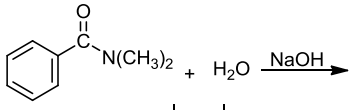
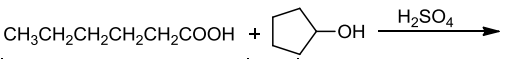
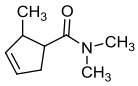
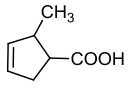
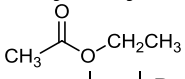
Ques. no.	Question
41	**Consider the stereoisomers (A–E) drawn below: Which structure is an enantiomer of structure A?**  A B C D E **A** Structure B **B** Structure C **C** Structure D **D** Structure E
42	**Select the enantiomers stereoisomers of glyceraldehyde, using Fischer projection formula.**  **A**  **B**  **C**  **D** 
43	**Fill in the blank with correct statement; Enantiomers are stereoisomers because of…..** **A** Not mirror images of each other **B** Nonsuperimposable mirror images of each other **C** Cis–trans isomers of each other **D** All of the above
44	**Identify the product when Cyclohexanol is dehydrated in the presence of H_2SO_4.**  **A**  **B**  **C**  **D** 
45	**Identify the product when given alcohol is carry to oxidization…**  **A**  **B**  **C**  **D** No reaction
46	**Fischer projections of both enantiomers for given compound will be…**  **A**  **B**  **C**  **D** 

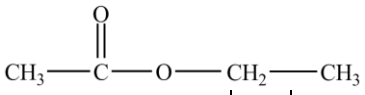
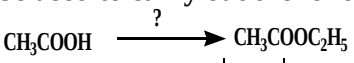
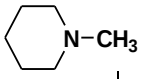
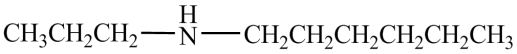
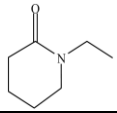
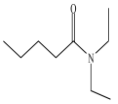
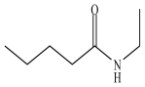
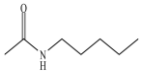
بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)

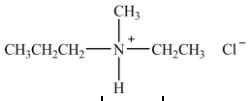
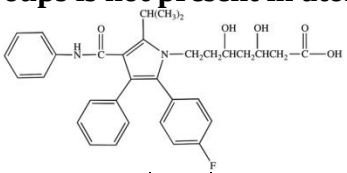
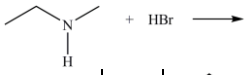
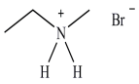
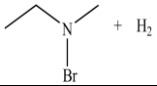
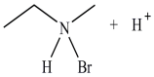
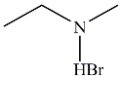
Ques. no.	Question
47	**The IUPAC name for the following compound is……**  **A** 2-methylcyclo pentanal **B** 2-methylcyclo pentan**ol** **C** 1-methylcyclo pentanone **D** 2-methylcyclo pentanone
48	**Identify the product when given Alcohol is dehydrated in the presence of H_2SO_4.**  **A**  **B**  **C**  **D** 
49	**Select the compounds 1, 2 and 3 in order of increasing boiling point, which is..**  **A** 2 → 1 → 3 **B** 3 → 2 → 1 **C** 1 → 3 → 2 **D** None of the above
50	**Select the compound that is water soluble….** **A**  **B**  **C**  **D** 

(Chem 109 Chapter 13)

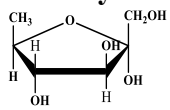
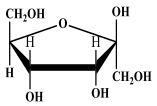
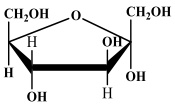
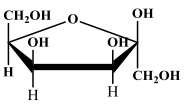
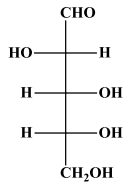
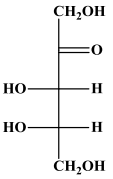
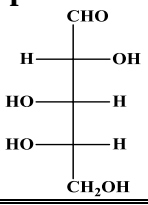
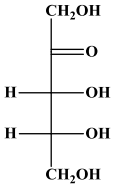
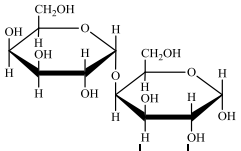
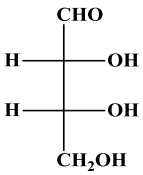
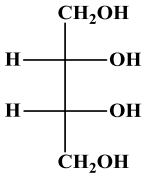
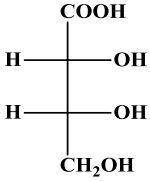
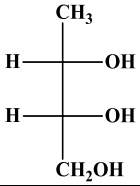
Ques. no.	Question
1	**Which of these compounds is a secondary amide?** **A**  **B**  **C**  **D** 
2	**What is the IUPAC name of the compound given below?**  **A** 2-Methyl-2-propylpropanoic acid **B** 2-Methyl-2-propyl-1-propanoic acid **C** 2,2-Dimethyl pentanoic acid **D** 2,2-Dimethyl-1-pentanoic acid
3	**Which statement about the labeled carbons in the compound below is true?**  **A** C1 is an α carbon and C2 is a β carbon **B** C2 is an α carbon and C1 is a β carbon **C** C3 is an α carbon and C2 is a β carbon **D** C2 is an α carbon and C3 is a β carbon
4	**What is the common name of the compound given below?**  **A** *m*-Bromobenzoic acid **B** 3-Bromoaceto benzenoic acid **C** o-Bromobenzene carboxylic acid **D** 3-Bromo-1-acetobenzoic acid
5	**What is the IUPAC name of the compound given below?**  **A** Heptyl propanoate **B** Hexyl propanoate **C** Propyl heptanoate **D** 4-Decanoate
6	**The general test for carboxylic acids is:** **A** Reduction test **B** Iodoform test **C** Acidity test **D** Oxidation test
7	**Reaction between an alcohol and a carboxylic acid is called**: **A** Neutralization **B** Dehydration **C** Esterification **D** Reduction
8	**What is the IUPAC name of the compound given below?**  **A** N,N-dimethyl propanamide **B** *N,N*-dimethyl ethylamide **C** Dimethyl propanamide **D** Dimethylamino propanamide
9	**What is the structure of 2-chloro-3-hydroxy-4-methylpentanoic acid?** **A**  **B**  **C**  **D** 
10	**Which compound has the highest boiling point?** **A** $(CH_3)_2CHCH_2CHO$ **B** $CH_3CH_2CH_2CH_2CH_2COOH$ **C** $(CH_3)_2CHCH_2CH_2CH_2OH$ **D** $CH_3(CH_2)_6CH_3$

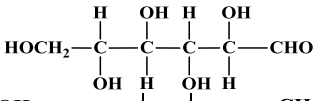
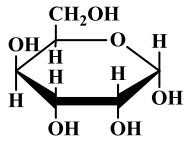
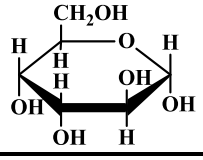
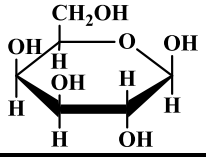
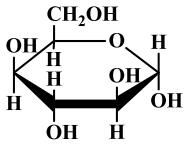
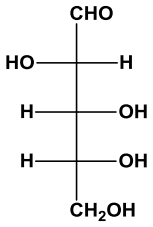
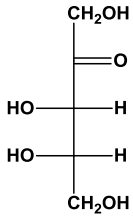
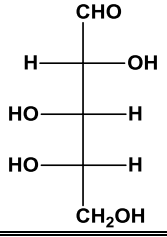
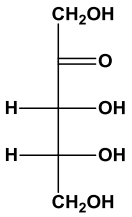
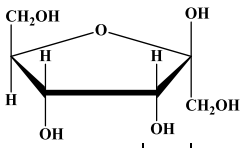
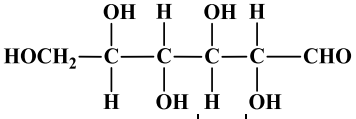
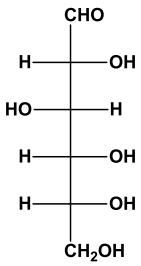
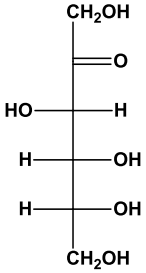
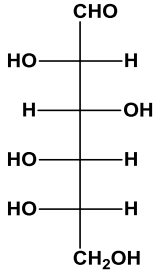
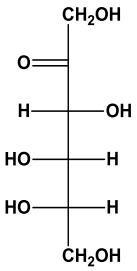
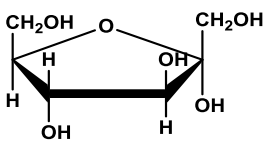
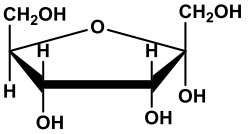
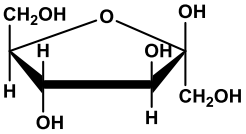
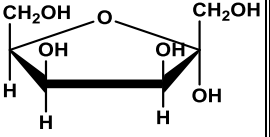
Ques. no.	Question							
11	**Which amide has the lowest boiling point?**							
	A	$CH_3(CH_2)_5CONH_2$	**B**	$CH_3CH_2CON(CH_2CH_3)_2$	**C**	$CH_3(CH_2)_4CONHCH_3$	**D**	$CH_3(CH_2)_7CONH_2$
12	**Which types of compounds are formed when Carboxylic acids react with bases such as NaOH?**							
	A	Alcohols	**B**	Carboxylate salts	**C**	Esters	**D**	amides
13	**Hydrolysis of an ester by an aqueous base is called as:**							
	A	Esterification	**B**	Saponification	**C**	Neutralization	**D**	Dehydration
14	**Which of the following properly describes soaps?**							
	A	Fatty acids	**B**	Salts of carboxylic acids that have a long hydrocarbon chain	**C**	Salts of carboxylic acids that have a short hydrocarbon chain	**D**	Carboxylic acids
15	**What organic product is formed when a carboxylic acid reacts with an alcohol in the presence of conc. sulfuric acid?**							
	A	Ether	**B**	Ester	**C**	Ketone	**D**	Amide
16	**Identify the products of hydrolysis in the following amide.** 							
	A	C_6H_5COOH + $(CH_3)_2NH$	**B**	C_6H_5COOH + CH_3NH_2	**C**	C_6H_5COONa + $(CH_3)_2NH$ + H_2O	**D**	$C_6H_5CON(CH_3)_2$ + H_2O + NaOH
17	**Arrange the following compounds in order to increasing boiling points.** a) $CH_3\ CH_2\ CH(CH_3)_2$ b) $CH_3\ CH_2\ COOH$ c) $CH_3\ CH_2\ COCH_3$							
	A	b < c< a	**B**	b < a< c	**C**	a < c< b	**D**	a < b< c
18	**What are the products of the reaction shown?** 							
	A	Hexyl cyclopentanoate	**B**	Cyclopentyl hexanoate	**C**	Pentyl cyclopentanoate	**D**	Cyclopentyl pentanoate
19	**Which reagent, when reacted with dimethylamine, would produce the compound shown below?** 							
	A		**B**		**C**		**D**	$N(CH_3)_3$
20	**What products are formed in the acid hydrolysis of the ester shown below?** 							
	A	Ethanol and acetic acid	**B**	Acetic acid and water	**C**	Propanoic acid and ethanol	**D**	Acetic acid and ethane

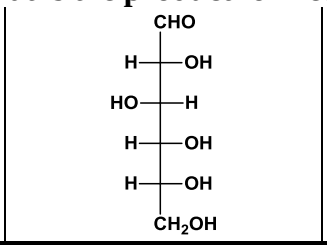
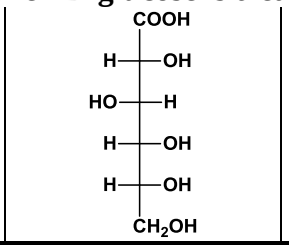
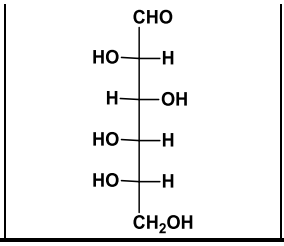
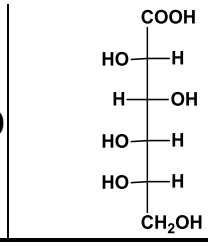
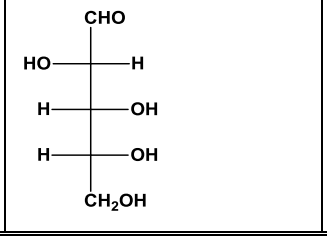
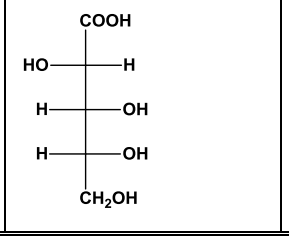
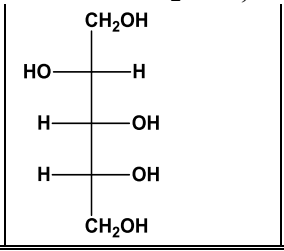
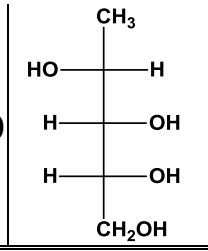
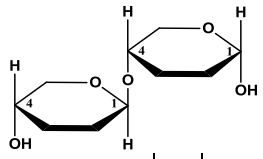
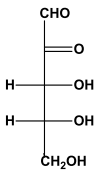
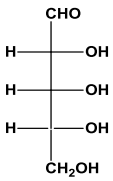
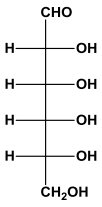
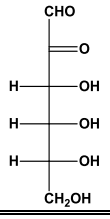
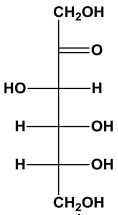
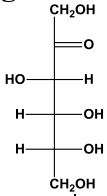
Ques. no.	Question							
21	**What products are formed in the base hydrolysis of the ester shown below with NaOH?** 							
	A	Ethanol and acetic acid	**B**	Acetic acid and sodium ethoxide	**C**	Methanol and sodium propanoate	**D**	Sodium acetate and water
22	**The IUPAC name of the compound $CH_3CH_2CONHCH_3$ is:**							
	A	Methylpropylamine	**B**	Butylamine	**C**	N-methyl propanamide	**D**	All are correct
23	**Which compound is the most soluble in water?**							
	A	$CH_3CH_2CH_2COOH$	**B**	$CH_3(CH_2)_6COOH$	**C**	$CH_3(CH_2)_6CH_3$	**D**	$CH_3(CH_2)_6NH_2$
24	**Which statement concerning carboxylic acids is incorrect?**							
	A	The functional group of a carboxylic acid is abbreviated as COOH or CO_2H.	**B**	Carboxylic acids are hydrogen ion donors.	**C**	The presence of carboxylic acid increases [H3O+] in an aqueous solution relative to water.	**D**	Carboxylic acid with a strong base produces a water-insoluble carboxylate salt.
25	**Identify the reagents which can be used to carry out the following reaction.** 							
	A	C_2H_5OH	**B**	CH_3OH	**C**	C_2H_5OH/H_2SO_4	**D**	CH_3OH/H_2SO_4
26	**Select the correct name of the following structure $(CH_3)_2$ CH CH_2 CH_2 COOH**							
	A	Pentanoic acid	**B**	4-Methylpentanoic acid	**C**	Hexanoic acid	**D**	2-Methyl pentanoic acid
27	**Classify the following amine as:** 							
	A	Primary amine	**B**	Tertiary amine	**C**	Secondary amine	**D**	Quaternary amine
28	**What is the IUPAC name of the compound shown below?** 							
	A	Propylhexylamine	**B**	N-propyl-1-hexanamine	**C**	N-hexyl-1-propanamine	**D**	Hexylpropylamine
29	**What amide is formed when pentanoic acid is heated with ethylamine**							
	A		**B**		**C**		**D**	
30	**Which compound has the highest boiling point?**							
	A	$(CH_3)_2CHCH_2COOCH_3$	**B**	$CH_3(CH_2)_6NH_2$	**C**	$(CH_3)_2CH(CH_2)_4OH$	**D**	$CH_3(CH_2)_6CH_3$

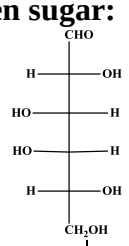
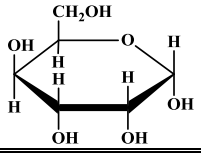
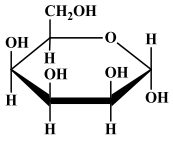
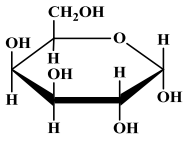
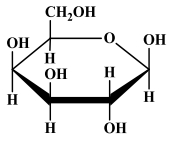
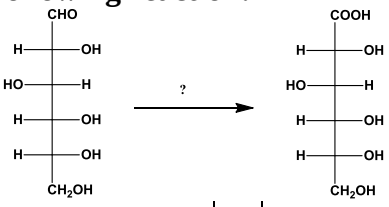
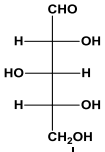
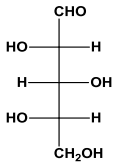
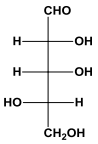
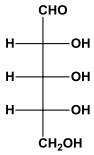
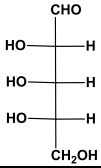
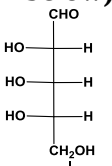
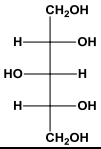
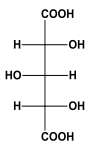
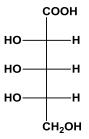
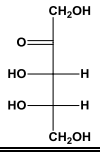
Ques. no.	Question							
31	**What is the IUPAC name of the amine salt shown below?** 							
	A	Ethylmethylpropylammonium chloride	**B**	*N*-Ethyl-*N*-methyl-1-propanammonium chloride	**C**	*N*-Ethyl-*N*-methyl-N-propylammonium chloride	**D**	*N*-Methyl-*N*-propylethanammonium chloride
32	**Which amine has the highest boiling point?**							
	A	$CH_3(CH_2)_5CH_2NH_2$	**B**	$HN(CH_2CH_3)_2$	**C**	$CH_3(CH_2)_5NHCH_2CH_3$	**D**	$(CH_2CH_3)_3\ N$
33	**What products are formed when (Dimethyl amine) reacts with HCl?**							
	A	$(CH_3)_2NH^+Cl^-$	**B**	$(CH_3)_2NH_2$	**C**	$(CH_3)_2NH_2^+Cl^-$	**D**	$(CH_3)_3N^+Cl^-$
34	**What is the name of the compounds with the general formula of $R_4N+\ X–$?**							
	A	Tertiary ammonium salts	**B**	Quaternary ammonium salts	**C**	Tetraammonium salts	**D**	Tertiary ammonia salts
35	**Which of these functional groups is not present in atorvastatin?** 							
	A	Carboxylic acid	**B**	Benzene	**C**	Ketone	**D**	Amine
36	**What are the products in the acid–base reaction shown below?** 							
	A 		**B** 		**C** 		**D** 	
37	**Identify the organic compound which is more soluble in water:**							
	A	$CH_3(CH_2)_4COOH$	**B**	$CH_3(CH_2)_5COOH$	**C**	$CH_3(CH_2)_6COONa$	**D**	$CH_3(CH_2)_6COOH$
38	**Select the organic compound which has the higher boiling point.**							
	A	CH_3CH_2COOH	**B**	$CH_3(CH_2)_2OCH_3$	**C**	CH_3COOCH_3	**D**	$CH_3(CH_2)_3OH$
39	**Methyl formate is a/an:**							
	A	Aldehydes	**B**	Carboxylic acid	**C**	Alcohol	**D**	Ester
40	**Na_2CO_3 solution gives strong effervescences with:**							
	A	Aldehydes	**B**	Carboxylic acid	**C**	Alcohol	**D**	Ester

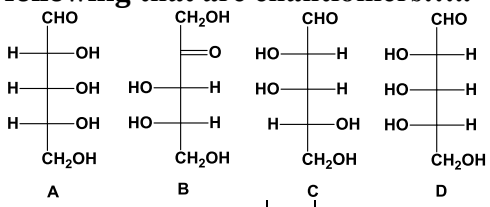
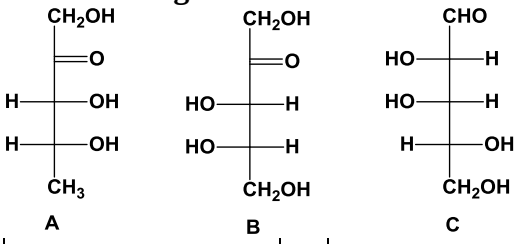
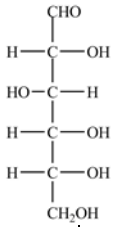
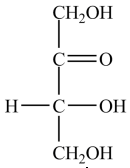
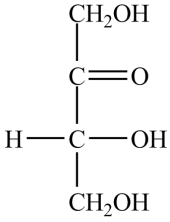
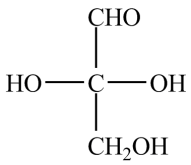
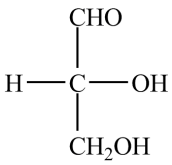
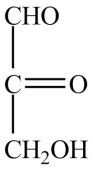
(Chem 109 Chapter 14)

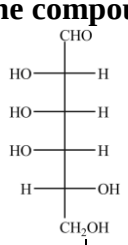
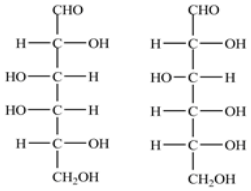
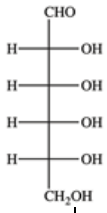
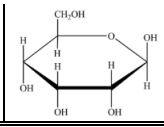
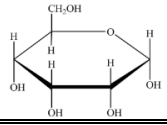
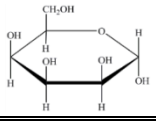
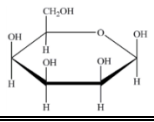
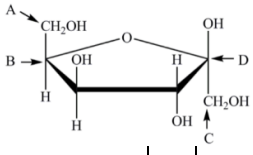
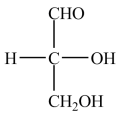
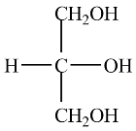
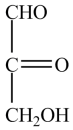
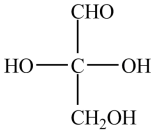
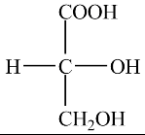
Ques. no.	Questions
1	**What is the name of the bond formed between glucose and galactosemonosaccharides to produce the disaccharide lactose?** **A** α-1,2-glycosidic bond **B** β-1,4-glycosidic bond **C** α-1,4-glycosidic bond **D** β -1,2-glycosidic bond
2	**Select the cyclic structures which represents α-D-fructose:** **A**  **B**  **C**  **D** 
3	**When D-glucose is treated with Benedict's reagent (a blue solution)……..** **A** No reaction takes place **B** Brick red ppt is formed **C** Violet colour is formed **D** Odour of formaldehyde
4	**Number of chirality center(s) in Ketotriose is/ are……** **A** 0 **B** 1 **C** 2 **D** 3
5	**Which of the following monosaccharides represents L-Aldopentose?** **A**  **B**  **C**  **D** 
6	**The structure given below corresponds to a disaccharide in the form of :**  **A** α-glycoside **B** β-glycoside **C** δ-glycoside **D** None of the above
7	**The hydrolysis of monosaccharides gives….** **A** One unit of glucose and one unit of fructose **B** Two units of glucose **C** One unit of glucose and one unit of galactose **D** None of the above
8	**The hydrolysis of maltose gives two units of glucose (C6H12O6), molecular formula of maltose is…..** **A** $C_{12}H_{23}O_{12}$ **B** $C_{12}H_{22}O_{11}$ **C** $C_{12}H_{22}O_{10}$ **D** $C_{12}H_{12}O_6$
9	**When a D-aldotetrose is treated with H2/Pd, final product will be…..** **A**  **B**  **C**  **D** 
10	**D-glucose and D-fructose are monosaccharides that represent a pair of…..** **A** Constitutional isomers **B** Cis-trans isomers **C** Enantiomers **D** Identical molecules

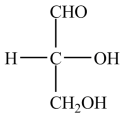
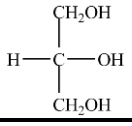
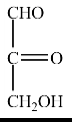
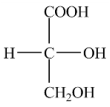
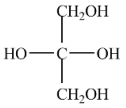
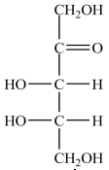
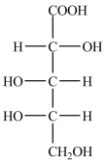
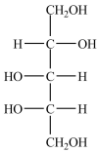
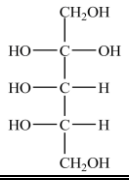
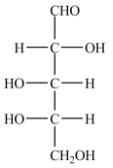
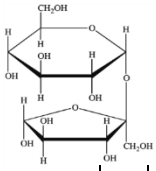
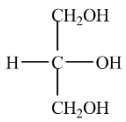
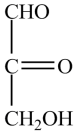
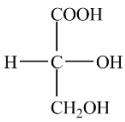
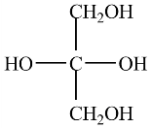
Ques. no.	Questions
11	**Cellulose is an unbranched polymer composed of repeating of glucose units joined in a…….** **A** 1→4-β-glycosidic linkage **B** 1→4-α-glycosidic linkage **C** 1→2-β-glycosidic linkage **D** 1→2-α-glycosidic linkage
12	**α-Isomer of cyclic form of the given sugar will be as……**  **A**  **B**  **C**  **D** 
13	**Which of the following monosaccharides represents L-ketopentose?** **A**  **B**  **C**  **D** 
14	**The following given sugar is classified as……**  **A** α-isomer **B** β-isomer **C** D-isomer **D** L-isomer
15	**The number of Chirality Center(s) of the structure below is/ are… :**  **A** 2 **B** 4 **C** 6 **D** 8
16	**Select the correct structure of L-Glucose in given options.** **A**  **B**  **C**  **D** 
17	**Identify the cyclic structures of β-D-fructose:** **A**  **B**  **C**  **D** 

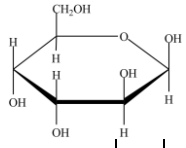
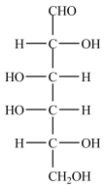
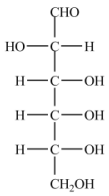
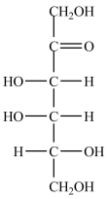
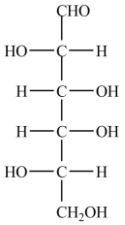
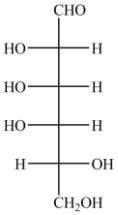
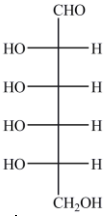
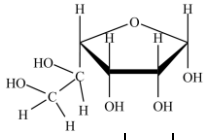
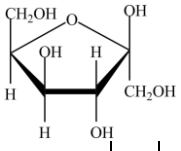
Ques. no.	Questions
18	**What is the product formed when D-glucose is treated with Cu^{+2} / OH^-?** **A**  **B**  **C**  **D** 
19	**Select the product formed when a D-aldopentose is treated with H_2 / Pd, is……** **A**  **B**  **C**  **D** 
20	**The structure below corresponds to a disaccharide in the form of :**  **A** α-glycoside **B** β-glycoside **C** δ-glycoside **D** None of the above
21	**All carbohydrates contain one or more Chirality Centers except:** **A** Dihydroxy acetone **B** Glycerladehyde **C** Glucose **D** Fructose
22	**Identify the monosaccharides which represents D-aldopentose.** **A**  **B**  **C**  **D** 
23	**Classify the given monosaccharide as:**  **A** Ketopentose **B** Aldopentose **C** Ketohexose **D** Aldohexose
24	**Numbers of Chirality Centers of the given sugar is/ are…….**  **A** One **B** Four **C** Three **D** Two

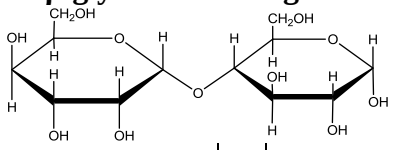
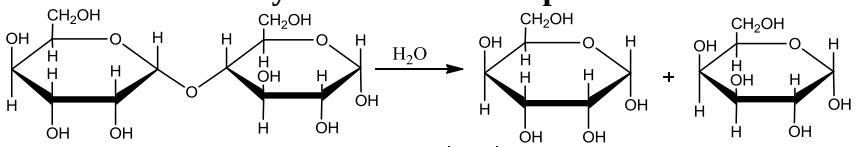
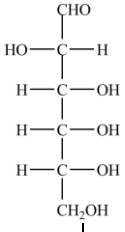
Ques. no.	Questions
25	**Select the α-isomer of cyclic form of the given sugar:**  **A**  **B**  **C**  **D** 
26	**Select the correct reagents for the following reaction:**  **A** Cu^{+2}/OH^- **B** HNO_3 **C** H_2/Pd **D** H_2O / H^+
27	**Identify the *Enantiomer* of the given sugar:**  **A**  **B**  **C**  **D** 
28	**Identify the product when aldopentose (shown below) is treated with Benedict's reagent…….**  **A**  **B**  **C**  **D** 
29	**Select the correct glycosidic linkage in cellulose:** **A** β-(1-4) **B** α-(1-4) **C** β-(1-2) **D** α-(1-2)
30	**D-glucose and L-glucose are monosaccharides that represent a pair of…..** **A** Constitutional isomers **B** Cis-trans isomers **C** Enantiomers **D** Identical molecules

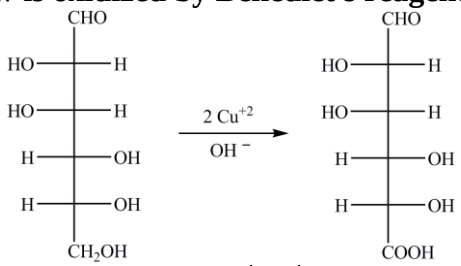
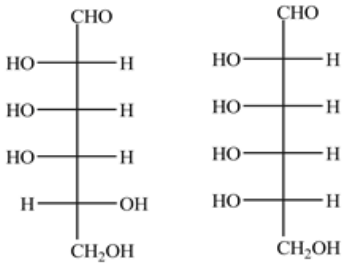
Ques. no.	Questions							
31	**Identify two compounds of the following that are enantiomers…..** 							
	A	A, B	**B**	A, D	**C**	B, C	**D**	C, D
32	**Select the pair of constitutional isomers in given structures....** 							
	A	A,B	**B**	A,C	**C**	B,C	**D**	None of the above
33	**Which carbohydrates cannot be converted to simpler compounds by hydrolysis?**							
	A	Disaccharides	**B**	Monosaccharides	**C**	Polysaccharides	**D**	Starches
34	**Monosaccharides with a carbonyl group at C1 are called?**							
	A	Anomers	**B**	Aldoses	**C**	Ketoses	**D**	Alditols
35	**Classify the compound shown below?** 							
	A	Aldohexose	**B**	Ketohexose	**C**	Aldopentose	**D**	Ketopentose
36	**Classify the compound shown below?** 							
	A	Tetraketose	**B**	Ketotriose	**C**	Ketotetrose	**D**	Aldotriose
37	**Which monosaccharide is an aldotriose?**							
	A 		**B** 		**C** 		**D** 	

Ques. no.	Questions
38	**How many chirality centers are present in the compound shown below?**  **A** 2 **B** 4 **C** 5 **D** 6
39	**The structures of galactose (left) and glucose (right) are shown below. How are the two monosaccharides related?**  **A** Structural isomers **B** Stereoisomers **C** Enantiomers **D** Anomers
40	**Which Haworth projection represents the α-anomer of the monosaccharide shown below?**  **A**  **B**  **C**  **D** 
41	**Which labeled carbon atom in the structure below is the anomeric carbon?**  **A** A **B** B **C** C **D** D
42	**Which product is formed when the compound below is treated with H_2, in presence of Pd catalyst?**  **A**  **B**  **C**  **D** 
43	**Formation of whichcolor in the Benedict's test indicates a reducing sugar is present in solution?** **A** Blue **B** Brick red **C** Bright yellow **D** Silver

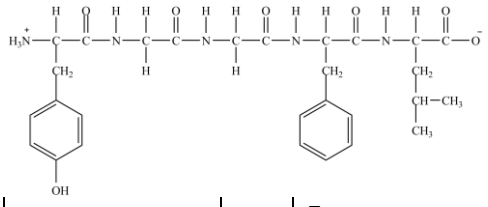
Ques. no.	Questions
44	**Which product is formed when the compound below is treated with Benedict's reagent?** 
	A  **B**  **C**  **D** 
45	**Which product is formed when the compound below is treated with Benedict's reagent?** 
	A  **B**  **C**  **D** 
46	**Which of the following joins togetherthe monosaccharide units that formDisaccharides and polysaccharides?**
	A Hydrogen bonding **B** Glycosidic linkages **C** Hemiacetal bonds **D** Dipole-dipole forces
47	**How many acetals are present in the disaccharide shown below?** 
	A 1 **B** 2 **C** 3 **D** 4
48	**What is the structure of cellulose?**
	A Unbranched skeleton of glucose molecules joined by 1→4-**β** glycoside linkages **B** Branched skeleton of glucose molecules joined by 1→4-**β** glycoside linkages **C** Unbranched skeleton of glucose molecules joined by 1→4-α glycoside linkages **D** Branched skeleton of glucose molecules joined by 1→4-α glycoside linkages
49	**Which structure is a three-carbon alditol?**
	A  **B**  **C**  **D** 

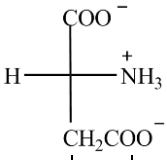
Ques. no.	Questions
50	**Which naturally-occurring monosaccharide forms the Haworth structure shown below?**  **A**  **B**  **C**  **D** 
51	**The Fischer projections of two monosaccharides are shown below. Which term best describes the relationship between the two?**   **A** Enantiomers **B** Anomers **C** Constitutional isomers **D** Diastereomers
52	**When a monosaccharide forms a cyclic hemiacetal, the carbon atom that is part of the hemiacetal is a new chirality center, called the anomeric carbon.** **A** True **B** False
53	**The α anomer of a cyclic monosaccharide has the –OH group drawn down, below the ring.** **A** True **B** False
54	**The monosaccharide shown below is an α anomer.**  **A** True **B** False
55	**At equilibrium, a solution of glucose in water is an equal mixture of the α anomer, the β anomer, and the acyclic aldehyde.** **A** True **B** False
56	**Certain monosaccharides—notably aldopentoses and ketohexoses—form five-membered rings, not six-membered rings, in solution.** **A** True **B** False
57	**The monosaccharide shown below is an β anomer.**  **A** True **B** False

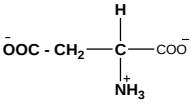
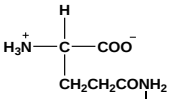
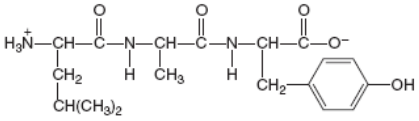
Ques. no.	Questions			
58	**The carbonyl group of an aldose is reduced to a secondary alcohol using hydrogen (H_2), in presence of palladium (Pd) metal.**			
	A	True	**B**	False
59	**An alditol contains an –OH group on every carbon atom.**			
	A	True	**B**	False
60	**Carbohydrates that are oxidized with Benedict's reagent are called reducing sugars, because they reduce the Cu^{2+} in Benedict's reagent to Cu^{+} during the reaction.**			
	A	True	**B**	False
61	**All aldoses and ketoses are reducing sugars.**			
	A	True	**B**	False
62	**All disaccharides contain at least one acetal that joins the rings together.**			
	A	True	**B**	False
63	**The disaccharide shown below has anβ-glycosidic linkage.** 			
	A	True	**B**	False
64	**Hydrolysis of the disaccharide below yields the indicated products.** 			
	A	True	**B**	False
65	**Cellulose is a highly branched polymer composed of repeating glucose units joined in a 1→4-α glycosidic linkage.**			
	A	True	**B**	False
66	**In aldohexoses, it is the –OH group on C5 that reacts with the aldehyde carbonyl to form two cyclic hemiacetals, called anomers.**			
	A	True	**B**	False
67	**α-D-galactose and β-D-galactose are enantiomers.**			
	A	True	**B**	False
68	**The structure shown has four (4) chirality centers and is a D monosaccharide.** 			
	A	True	**B**	False

Ques. no.	Questions			
69	**Glucose and other naturally occurring sugars are D sugars.**			
	A	True	**B**	False
70	**When the monosaccharide below is oxidized by Benedict's reagent, the indicated product results.** 			
	A	True	**B**	False
71	**Carbohydrates are structurally defined as polyhydroxyaldehydes ORpolyhydroxyketones, or compounds that can be hydrolyzed to any of them.**			
	A	True	**B**	False
72	**Disaccharides contain two carbonyl groups.**			
	A	True	**B**	False
73	**Monosaccharides with a carbonyl group at C2 are called ketoses.**			
	A	True	**B**	False
74	**All carbohydrates, except for dihydroxyacetone, contain one or more chirality centers.**			
	A	True	**B**	False
75	**The two monosaccharides shown below are related as enantiomers.** 			
	A	True	**B**	False

(Chem 109 Chapter 16)

Ques. no.	Question							
1	**Which is the simplest amino acid?**							
	A	Serine	**B**	Glutamine	**C**	Cysteine	**D**	Glycine
2	**What is the three-letter abbreviation of asparagine?**							
	A	Asp	**B**	Asg	**C**	Asn	**D**	Arg
3	**What is the charge on a zwitterion?**							
	A	Positive	**B**	Neutral	**C**	Negative	**D**	None of this
4	**What is the charge on an amino acid at a pH below its pI?**							
	A	Positive	**B**	Neutral	**C**	Negative	**D**	None of this
5	**How many different dipeptides can be formed when one valine reacts with one glycine?**							
	A	1	**B**	2	**C**	3	**D**	4
6	**How many different tripeptides can be formed when one isoleucine, one alanine, and one glycine react?**							
	A	3	**B**	6	**C**	18	**D**	27
7	**What is the C-terminal amino acid in the tetrapeptide glycylalanyisoleucylmethionine?**							
	A	Alanine	**B**	Glycine	**C**	Methionine	**D**	Isoleucine
8	**What is the N-terminal amino acid in the tetrapeptide glycylalanyisoleucylmethionine?**							
	A	Alanine	**B**	Glycine	**C**	Methionine	**D**	Isoleucine
9	**How many chirality centers are in leu-enkephalin (structure shown)?** 							
	A	3	**B**	4	**C**	5	**D**	6
10	**All amino acids have at least one chirality center.**							
	A	True	**B**	False	**C**		**D**	

Ques. no.	Question							
11	**Humans can synthesize only twenty of the amino acids needed for proteins.**							
	A	True	**B**	False	**C**		**D**	
12	**D-Amino acids have the $-NH_3^+$ group on the left side in the Fischer projection.**							
	A	True	**B**	False	**C**		**D**	
13	**The Fischer projection below represents a naturally occurring amino acid.** 							
	A	True	**B**	False	**C**		**D**	
14	**A dipeptide contains two amino acids joined together by two amide bonds.**							
	A	True	**B**	False	**C**		**D**	
15	**The amide bonds in peptides and proteins are called peptide bonds.**							
	A	True	**B**	False	**C**		**D**	
16	**By convention, the C-terminal amino acid is always written at the right end of the peptide chain and the N-terminal amino acid at the left.**							
	A	True	**B**	False	**C**		**D**	
17	**Acidic amino acids have lower p*I*values than basic amino acids.**							
	A	True	**B**	False	**C**		**D**	
18	**Glycine exists primarily in its neutral form at a pH ~ 6.**							
	A	True	**B**	False	**C**		**D**	
19	**The peptide leucylphenylalanylvalylvaline is abbreviated as Leu–Phen–Ala–Val–Val.**							
	A	True	**B**	False	**C**		**D**	
20	**Amino acids with an additional COOH group in the side chain are classified as acidic amino acids.**							
	A	True	**B**	False	**C**		**D**	

Ques. no.	Question							
21	**Fill in the blank. '*Proteins are*……**							
	A	Amino acids connected through hydrogen bonds linkage	**B**	Polypeptide chains connected through amide linkages	**C**	Polypeptide chains connected through glycosidic linkages	**D**	None of the above
22	**After addition of an acid in zwitter ion of an amino acid (X) has net positive charge is 1, the pH of amino acid will be…..**							
	A	pH=6	**B**	pH≤2	**C**	pH≥2	**D**	pH=10
23	**Classification of the given amino acid is…..** 							
	A	Neutral	**B**	Basic	**C**	Acidic	**D**	Zwitterion
24	**Classification of the given amino acid is…..** 							
	A	Neutral	**B**	Basic	**C**	Acidic	**D**	Zwitterion
25	**The net charge of the zwitterion of an amino acid is :**							
	A	-1	**B**	-2	**C**	zero	**D**	+1
26	**The pH at which the amino acid exists primarily in its neutral form is called as…**							
	A	Hydrogen bond	**B**	Melting point	**C**	Isoelectric point	**D**	Boiling point
27	**Two amino acids joined together by one peptide bond are called as……**							
	A	Tripeptide	**B**	Dipeptide	**C**	Polypeptide	**D**	Tetrapeptide
28	**Neutral amino acid at pH =11 shows predominated form which will be as……**							
	A	Zwitterion	**B**	Anionic form (-1)	**C**	Cationic form(+1)	**D**	all of them
29	**Select the amino acid which does not have *Chirality Center*.**							
	A	Alanine	**B**	Glycine	**C**	Histidine	**D**	Aspartic acid
30	**One peptide structure is given below; classification of this peptide is……** 							
	A	Dipeptide	**B**	Tetrapeptide	**C**	Monopeptide	**D**	Tripeptide

بنك الأسئلة في مقرر الكيمياء الطبية 2 (109-تحض)