INDIAN SCHOOL DARSAIT

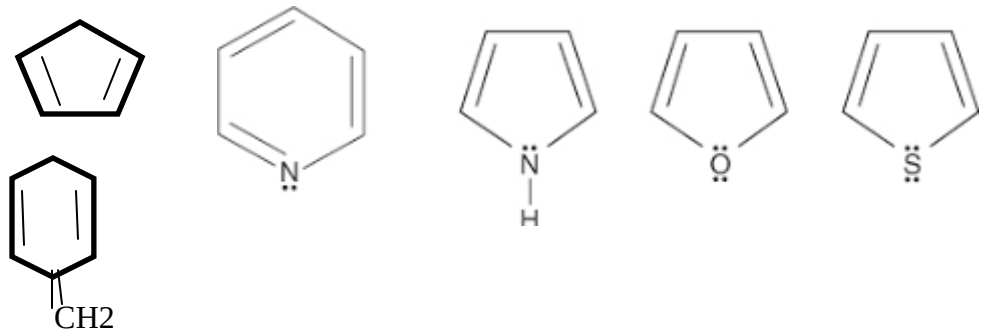
DEPARTMENT OF CHEMISTRY

Subject: Chemistry Topic : ORGANIC CHEMISTRY AND HYDROCARBONS Date of Worksheet: 5.12.2018

Resource Person: Rohitha Date of Submission:_____

Name of the Student: _____ Class &Division: XI Roll Number: _____

1	Write the IUPAC name of the following a)$CH_3CH=C(CH_3)_2$ b)$CH_3(CH_2)_4CHCH_2CH_3$ $CH_2CH(CH_3)_2$ c)$CH_3CH=CHCH_2CH_2C\equiv CH$ d)$CH_3CH_2CH(Cl)CH_2CH(OH)CH_2COOH$	1 each
2	Write the structure of the following a)2-amino-3-hydroxypropanal b)3-phenylprop-2-en-1-oic acid c)2-methoxy-2,3-dimethylbutanal d)5,6-Diethyl-3-methyldec-4-ene e)2-Ethyl-3-hydroxy-2-methylpropanal	1 each
3	Write all the possible isomers of hexane with their names.	2
4	Arrange the following in the increasing order of stability and justify your answer. a)$CH_3CH_2^+$, $(CH_3)_2CH^+$, CH_3^+, $(CH_3)_3C^+$ b) $CH3^\cdot$, $(CH_3)_3C^\cdot$, $(CH_3)_2CH^\cdot$, $CH_3CH_2^\cdot$	2 each
5	a)Draw the resonance structures of C_6H_5OH, C_6H_5CHO b)Draw the hyper conjugative structures of 2-butene	2 each
6	Give a short note on the acidic character of alkyne.	2
7	Explain in brief a) Dumas method b)Carius method for Sulphur	2 each
8	Describe a method which can be used to separate two components with different solubilities in a solvent X.	2
9	How can you separate a mixture of acetone and methanol? Give the principle behind it.	2
10	Which of the following has higher boiling point and why? 2-methylpentane, n-hexane,2,3-dimethyl butane	2
11	How will you convert ethyne and hexane to benzene?	2
12	Complete the reaction a)$CH_3CH=C(CH_3)_2 + O_3 \longrightarrow$ b)$C_4H_{10} \xrightarrow{773K}$	1 each

	c)$CH_3C{\equiv}CCH_3 + H_2 \xrightarrow{Na/liq.NH_3}$	
13	Convert a) isopropyl bromide to n-propyl bromide b)acetic acid to methane c)methane to ethene d)ethanoic acid to benzene e)ethane to ethyne f)1-bromopropane to 2-bromopropane g)propyne to propanone	1 each
14	How will you distinguish between ethane and ethylene?	2
15	How does ethylene react with a)bromine b)alkaline $KMnO_4$ c)hydrogen in presence of lindlars catalyst	1 each
16	Which alkene on ozonolysis produces propanone only? Write the reaction involved.	2
17	An alkene A on ozonolysis gives a mixture of ethanol and pentan -3-one. Identify A. write the structure and IUPAC name of A. Also write the equations involved.	2
18	Give the chemistry behind detection of nitrogen and halogen qualitatively.	3
19	Find whether the following compounds are aromatic or not? 	1 each
20	Addition of HBr to propene yields 2-bromopropane, while in presence of benzoyl peroxide, the same reaction yields 1-bromopropane. Explain and give the mechanism.	3
21	What happens when? a)Benzene is treated with methyl chloride in presence of an. $AlCl_3$ b) Benzene is treated with a mixture of con.HNO_3 and con. H_2SO_4 c) Pentane is heated with HCl in presence of an. $AlCl_3$.	3
22	An alkyl halide $C_5H_{11}Br$ (A) reacts with ethanolic solution of KOH to give an alkene (B) having molecular formula C_5H_{10}. B reacts with Br_2 in CCl_4 to give a compound C. C on dehydrobromination with sodamide gives a com pound D having molecular formula C_5H_8. D on complete hydrogenation yields a straight chain alkane. Identify A, B, C and D. give the equations involved.	5