	<u>CONCEPTS IN ORGANIC CHEMISTRY, Synthetic organic chemistry, Isomerism-2 &</u> <u>Hydrocarbons -2</u>							
1.	Which effect is a temporary effect a presence of attacking reagent? 1) Mesomeric effect 3) Hyperconjugatrve effect		and ope	erates only				
	,		,	4) Electromeric effect				
2.	Addition of H^+ to an alkene is an example of							
	1) +E effect	2) -E effect		3) +M effeo	Ct	4) -l effect		
3.	terms of		•			ring can be explained in		
	1) +R effect	2) –R effect		3) +E effec	л	4) –l effect		
4.	Zero inductive effect	-						
	1) $C_6 H_5^-$ 2) –H		3) CH	3	4) Cl⁻			
5.	Which of the following	ng is stronges	st acid?					
	· ·	1) 2–Chloropentanoic acid			ropentano			
	3) 5– Chloropentanoic		4) 4– Chlo	ic acid				
6.	CH_3 group of toluene is o, p-directing group due to the							
	1) Hyper conjugation			2) Resona				
	3) Inductive effect			4) Electron	neric effec	t		
7.	Which of the following	ng alkyl group	s has th	ne maximun	n + I –effe	ct?		
	1) CH ₃ –	2) CH ₃ CH ₂ -		3) (CH ₃)CH	H —	4) (CH ₃) ₃ C –		
8.	Which of the following	ng does not sh	ow ele	ctromeric ef	ffect?			
	1) Alkenes	2) Ethers		3) Aldehyd	les	4) Ketones		
9.	Aryl halides are less reactive towards nucleophilic substitution reactions as compared							
	to alkyl halides due 1 1) resonance	:0		2) Hyper c	oniugation			
	3) –I effect			4) All the th		I		
40				, , , , , , , , , , , , , , , , , , ,				
10.	Benzene ring activat	2) –OR and –		3) –NH ₂		1) All are correct		
11.	The o, p-directing bu	,		, –		4)All are correct		
•••	1) –NH ₂	2) –OH		(alkyl)	4) X—	(halogen)		
12.	Alkyl halides react w	vith metallic so	,		,			
	1) Alkanes with same							
	2) Alkanes with double the number of carbon atoms							
	3) Alkenes with same number of carbon atoms							
	4) Alkenes with double the number of carbon atoms							
13.	be warmed with sod	n order to prepare a pure sample of 2.3 –Dimethylbutane. Which of the follo be warmed with sodium in ether.						
	1) Isopropyl bromide			2) Tertiary	•	nide		
11	3) Ethyl chloride	wartad to othe	no hu H	4) n-Propy	i promide			
14.		Methane can be converted to ethane by the reaction 1) Chlorination followed by the reaction with alcoholic KOH						
		2) Chlorination followed by the reaction with aqueous KOH						
	3) Chlorination followed by Wurtz react on							
		-				1		

	4) Chlorination followed by decarboxylation								
15.	5. When ethyl iodide and n-propyl iodide are allowed to react with sodium metal in ether, the number of alkanes that could be produced is								
	1) only one	2) two alkane		alkanes					
16.	. The reduction of RCN to RCH₂ NH₂ by using Na/C₂ H₅ OH, is called:								
	1) Wurtz reaction 2) Frankland reaction								
	3) Mendius reaction	4) Hofmannn bromamide reaction.							
17.	Grignard reagent rea	cts with CO₂ to produce:							
	1) aldehyde	2) ketone	3) acid		4) alcohol				
18. A solution of a substance did not show optical rotation in polarimeter. Which of the									
1	following is expected t	o be correct fo	or the substance	?					
	1) It may be a racemic m	nixture	2) It may be a m	neso compo	und				
	3) It may not have chiral	C-atom	4) Any of the ab	ove may be	possible.				
19.	(C ₆ H₄)CI(OH) shows:								
	1) Functional isomerism		2) metamerism	2) metamerism					
÷	3) mesomerism		4) position isomerism.						
20	Glucose and fructose	hava isom	ore receptively	<i>,</i> .					
	1) both 16 2) bot		3) 8, 16	, 4) 16	8				
		110	5) 6, 10	4) 10	, 0.				
21. A compound with molecular formula C ₇ H ₁₆ shows optical isomerism, the compound will be:									
	1) 2,3-dimethylpentane	dimethylpentane							
3) 2-methylheptane 4) none of these									
22. (CH₃—CHO+ HCN→CH₃	,—CHOH – CN	$\xrightarrow{H_2O}$ CH ₃ —	снон—сс	OOH an asymmetric centre				
i	s generated. The acid g	enerated would	d be:						
	1) d-isomer 2) I-isc	omer 3) 509	% d and 50% l-isc	omer 4) 20%	% d and 80% -isomer.				
23.	The two isomers give	en below are							
	CH ₃		CH ₃						
	H	Cl	Н ———		— Cl				
	Н ————	——Br	Br		— н				
	CH ₃		CH ₃						
	1) Enantiorners		2) Mesomers						

3) Position isomers 4) Diastereomers

24.	Fo a mixture of conc. HNO ₃ and conc. H_2SO_4 , benzene was added. This mixture was neated for 30 minutes at 100°C. The main product is					
	1) $C_6H_2NO_2$					
	3) m–Dinitrobenzene	4) m–Nitrobenzene sulphon	ic acid			
25.	Catalyst used in Friedel Craft reaction	ıis				
	1) Zinc oxide 2) Ferric chloride	e 3) Sodium 4) Anhydrous	s AICl₃			
26.	In benzene all the six C–C bonds have same length because of					
	1) Isomerism	2) Chain isomerism	2) Chain isomerism			
	3) Resonance	4) Hybridisation	4) Hybridisation			
27.	Among the following compounds which can be very easily suphonated?					
	1) Benzene 2) Nitrobenzene	3) Toluene 4) Chloroben	zene			
28.	An aromatic molecule will					
	i) have 4n π –electrons	ii) have (4n+2) π electrons	ii) have (4n+2) π electrons			
	iii) be planar	iv) be cyclic	iv) be cyclic			
	1) (i) (ii) (iii)	2) (i) (ii) (iv)				
	3) (ii) (iii) (iv)	4) (i) (ii) (iii) (iv)				
20						
29.	A salt producing hydrocarbon among 1) Methane 2) Ethane 3					
	T) Methane 2) Ethane 3) Ethyne 4) Ethene				
30.	Which among the following is the most strained cycloalkane					
	1) Cyclopropane 2) Cyclobutane				
	3) Cyclopentane 4) Cyclohexane				
31.	Acylation of benzene to produce aliphatic aromatic ketone is called					
	1) Hydroformylation	2) Friedel Crafts reaction				
	3) Wurtz reaction	4) Benzoin condensation				
32.	When acetylene is passed through a	ed hot tube, the product is				
•=-) ethane 4) toluene				
22	,	, , , , , , , , , , , , , , , , , , ,				
33.	Which of the following theory can exp 1) Baeyer strain theory		a nigner members			
	3) Molecular orbital theory	4) All of these				
34.	Benzene does not give addition react	,	ouble bonds			
54.	because	ions even mough it contain 5 de	Juble bollus			
	1) double bonds change their position rapidly					
	2) resonance lowers the energy of benzene molecule and leads to greater					
	stabilization					
	3) double bonds in benzene are strong					
	4) None					
35.	Regarding benzene molecule, Which of the following statement is wrong?					
	1) It has six identical carbon atoms					
	2) It is an unsaturated compound					
	3) It is an unsaturated compound and a	answers tests for unsaturation				
	4) C -C bond length is identical					