Exercise-I (Conceptual Questions) **Build Up Your Understanding**

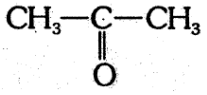
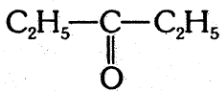
General method of Preparation

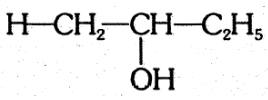
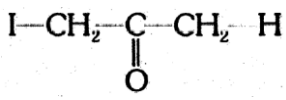
1. Alkyl halides can be obtained by all methods excepts

(1) $CH_3–CH_2–OH + HCl \xrightarrow{ZnCl_2}$ (2) $CH_2=CH–CH_3 + HBr \longrightarrow$

(3) $C_2H_5OH + NaCl \longrightarrow$ (4) $CH_3COOAg + Br_2/CCl_4 \xrightarrow{hv}$

2. Which of the following will not give Iodoform test

(1)  (2) 

(3)  (4) 

3. Which of the following product is obtained when bleachirlg powder is distilled with acetone

(1) $CC1_4$ (2) $CHOl_3$ (3) $CH_3–CH_3$ (4) All

4. Which will give yellow ppt. with iodine and alkali

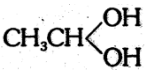
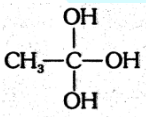
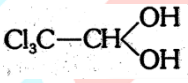
(1) Propan–2–ol (2) Benzophenone (3) Methyl acetate (4) Acetamide

Physical Properties

5. Which of the following has the highest boiling point

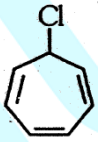
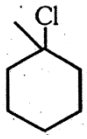
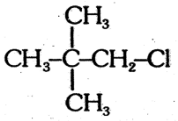
(1) CH_3CH_2I (2) CH_3O (3) CH_3I (4) CH_3Br

6. A compound containing two –OH groups attached with one carbon atoms is unstable but which one of the following is stable

(1)  (2)  (3)  (4) All

Chemical Properties

7. Arrange the following compounds in decreasing order of reactivity in S_Nl reaction :-

(a) $Ph – CH_2 – Cl$ (b)  (c)  (d) 

(1) a > c > b >a (2) c > d > b> a (3) a > b > c > d (4) b >a> c > d

8. 

about above reaction the incorrect statement is

(1) The name of reaction is Reimer-Teiman's reaction

(2) The intermediate in the reaction is dichloro carbene

(3) The final product is salicylaldehyde

(4) The final product is benzyl chloride

9. The purity of $CHCl_3$ can be checked by

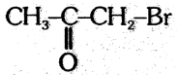
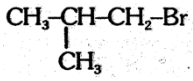
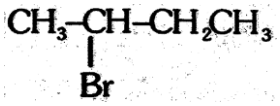
(1) treating $CHCl_3$ by NaOH

(2) treating $CHCl_3$ by HCl

(3) treating $CHCl_3$ with aq. $AgNO_3$
(4) treating $CHCl_3$ by C_2H_5–OH .

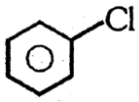
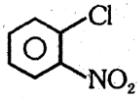
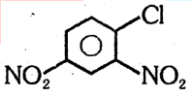
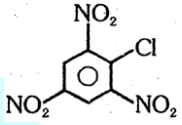
10. Pure $CHCl_3$ and pure CHI_3 can be distinguished
(1) treating with litmus paper
(2) treating with aq. KOH
(3) treating with HCl
(4) treating with aq. $AgNO_3$

11. Arrange the following compound in decreasing order of reactivity in S_N2 reaction.

(a) 
(b) $CH_3–CH_2–CH_2–CH_2Br$
(c) 
(d) 

(1) b > c > d > a (2) a > b > c > d (3) b > c > a > d (4) c > a > b > d

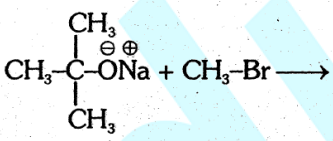
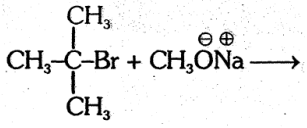
12. Which of the following undergoes hydrolysis most easily

(1) 
(2) 
(3) 
(4) 

13. Which of the following is used as insecticide
(1) D.D.T. (2) Chloritone (3) $CHCl_3$ (4) All of them

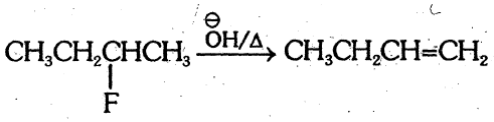
14. Which of the following when heated with KOH and primary amine gives carbylamine test
(l) $CHCl_3$ (2) CH_2Cl_2 (3) CH_3OH (4) CCl_4

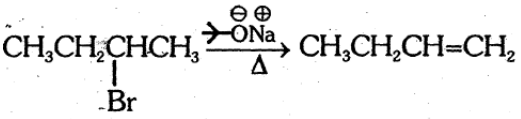
15. Which reaction gives elimiriation as a major product

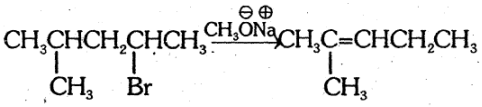
(1) 
(2) $CH_3–CH_2–Br + NaCN \xrightarrow{DMSO}$
(3) $CH_3–CH_2–Br + NaI \xrightarrow{\text{Dry acetone}}$
(4) 

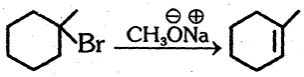
16. Iodoform gi'1es a precipitate with $AgNO_3$ on heating but chloroform does not because
(1) Iodoform is ionic
(2) Chloroform is covalent
(3) C–I bond in iodoform is weak and C–Cl bond in chloroform is strong
(4) None of the above

17. Which reaction product is wrong (major) product.

(1) 

(2) 

(3) 

(4) 

18. When alkyl magnesium halide reacts with R-NH_2, the product is

(1) R–R (2) R–H (3) R_2NH (4) R–X

19. Chloroform on reaction with acetone gives:-

(1) Acetylene (2) Chloretone (3) Nitrochloroform (4) Chloroacetone

20. Chloroform reacts with aniline and aqueous KOH gives :-

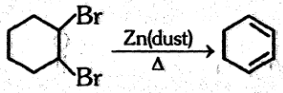
(1) Ph–N $\stackrel{\ominus}{=}$C (Phenyl isocyanide)

(2) Benzene

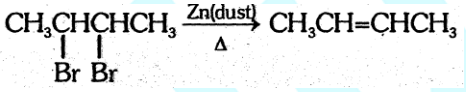
(3) Phenyl cyanide

(4) None of these

21. Which reaction product is wrong (major) product

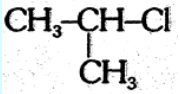
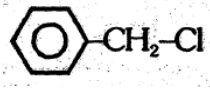
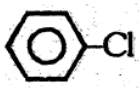
(1) 

(2) $CH_3CH_2CH_2Br \xrightarrow[\text{dry Acetone}]{NaI} CH_3CH_2CH_2I$

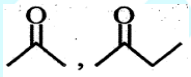
(3) 

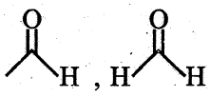
(4) $CH_3CH_2CHCl_2 \xrightarrow[(ii)\,H^+]{(i)\,NaNH_2\,(excess)} CH_3C\equiv CH$

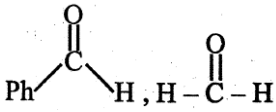
22. Which of the following undergoes nucleophilic substitution by S_N1 mechanism at fastest rate:

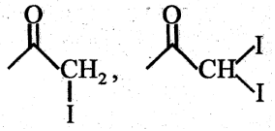
(1) $CH_3–CH_2–Cl$ (2)  (3)  (4) 

23. Which of the following pair is differentiated by Iodoform test?

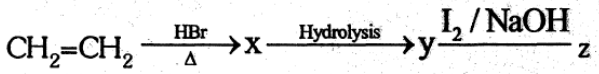
(1) 

(2) 

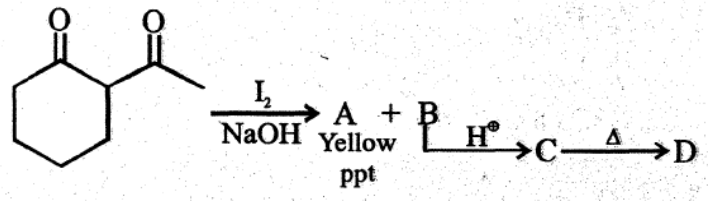
(3) 

(4) 

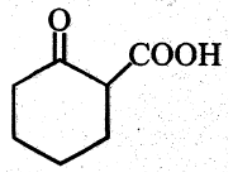
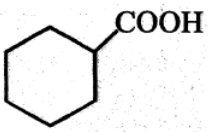
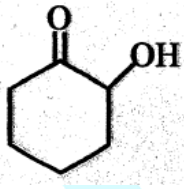
24. Identify z in the following series



(1) C_2H_5I (2)C_2H_5OH (3) CHI_3 (4)CH_3CHO

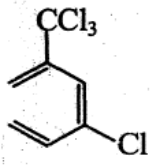
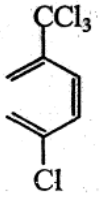
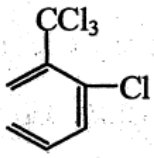
25. 

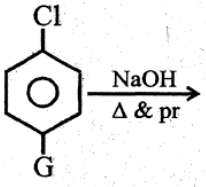
Identify D :-

(1)  (2)  (3)  (4) 

26. $C_6H_5CCl_3 \xrightarrow[Fe]{Cl_2} X$

In the above reaction X is

(1)  (2)  (3)  (4) None of these

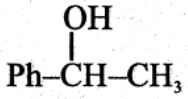
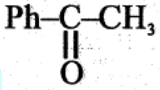
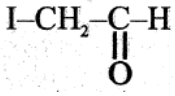
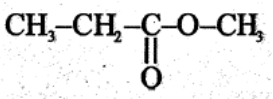
27. 

:-

Rate of reaction is maximum if G is :-

(1) $-OCH_3$ (2) $-CH_3$ (3) $-NO_2$ (4) –H

28. Which does not gives iodoform test :-

(1)  (2)  (3)  (4) 

Exercise-1 (Conceptual Questions) **ANSWER KEY**

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	3	2	2	1	1	3	4	4	3	4	2	4	1	1	4
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28		
Ans.	3	3	2	2	1	1	3	2	3	2	1	3	4		