Q.1 The complete combustion of CH_4 gives -

[1] $CO_2 + H_2O$ [2] $CO_2 + H_2$ [3] $CO_2 + COCl_2$ [4] $CO + H_2O$

Q.2 Which hydrocarbon are not formed by the wurtz reaction of ethyl iodide and n-propyl iodide -

[1] n-Butane [2] n-Heptane [3] n-pentane [4] n-Hexane

Q.3 Which product is not form in chlorination of CH_4 -

[1] CH_3—Cl [2] CH_3—CH_3 [3] Cl_2 [4] None of these

Q.4 What is the required volume of O_2 (lit.) for the complete combustion of 6 gm ethane -

[1] 6.12 [2] 7.8 [3] 15.68 [4] 22.4

Q.5 In nitration propane & higher alkane shows -

[1] Free radical substitution [2] Ionic mechanism [3] Both [4] None

Q.6 Methane cannot formed by -

[1] $COCl_2$ [2] CS_2 [3] $CHCl_3$ [4] CCl_4

Q.7 Which compound does not give alkane on reduction with Red P + HI -

[1] Alcohol [2] Aldehyde & Ketone [3] Acid [4] Acid derivatives

Q.8 n-heptane on reaction with chromium oxide, then dehydrogenation followed by cyclization gives -

[1] 1-heptene [2] Benzene [3] o-xylene [4] Methyl benzene

Q.9 The catalyst used in Ziegler process for polyethylene manufacture -

[1] Consists of aluminium triethyl and titanium tetrachloride

[2] Consists of aluminium chloride and titanium dioxide

[3] Is vanadium pentoxide

[4] Is finely divided nickel

Q.10 Baeyer's reagent is used in the laboratory for -

[1] Reduction process [2] Oxidation process [3] Detection of glucose [4] Detection of double bond

Q.11 Which one of the following is used to make 'nonstick' cookware -

[1] Polystyrene [2] Polytetrafluoroethylene [3] Polyethylene [4] None of these

Q.12 Reaction of isobutylene and conc $H_2SO_4 + SO_3$ gives -

[1] 2-Methyl propane-2-sulphonic acid [2] t-butyl sulphonic acid

[3] Both [4] None

Q.13 The reaction of perbenzoic acid at β-butylene gives -

[1] 2,3-Butanediol [2] 1,2-Epoxybutane [3] 2,3-Epoxypropane [4] 2,3-Epoxybutane

Q.14 $CH_2 = CH_2 \xrightarrow[CCl_4]{Br_2} A \xrightarrow[(ii)NaNH_2]{(i)Alc.KOH} B \xrightarrow{+2HX}$ C in reaction C is -

[1] Vis dihalide [2] Gem dihalide [3] Gem dibromide [4] α,ω - dihalide

Q.15 What the main product of addition of "Tildon reagent" at α - butylene -

[1] 2-Chloro-1-nitrosopropane [2] 1-Chloro-2-nitrosobutane

[3] 2-chloro-1-nitrosobutane [4] Butane nitrosochioride

Q.16 What type of compound form by the reaction of diazomethane at methyl ethylene -

[1] saturated acylic [2] Saturated homocyclic [3] Homocyclic aromatic [4] Unsaturated homocyclic

Q.17 The application of ethylene are -

[A] Formation of Mustard gas [B] Repining of Fruits

[C] Formation of Lewisite [D] Formation of Glycol

Correct answer is :

[1] ABD [2] ABC [3] ACD [4] BCD

Q.18 $CH_2 = CH_2 + H_2O \xrightarrow[CiCl_2]{PdCl_2}$ X, in reaction X is -

[1] Acetic acid [2] Ethylene glycol [3] Ethanal [4] Ethylene oxide

Q.19 Which of the following compound are not used in the "Oxo reaction" of olefins -

[1] HCHO [2] CO [3] Co [4] H_2

Q.20 Which olefine is formed on the heating Dimethyl n-propylamine oxide at 150^0 C -

[1] Ethene [2] Ethyl ethylene [3] Methyl ethylene [4] Sym. Dimethyl ethylene

Q.21 Which compound is formed by the oxidation of SeO_2 on ethyl ethylene -

[1] 2-butene-1-ol [2] 3-butene-2-ol [3] 1-butnen-1-ol [4] 3-butene-1-ol

Q.22 Koch reaction on propene give -

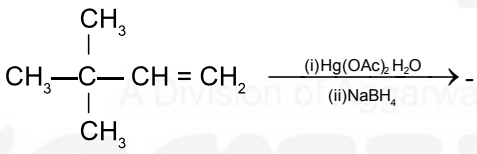
[1] Iso valeric acid [2] Isobutyric acid [3] Propionic acid [4] None of these

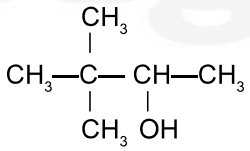
Q.23 In Whol's Ziegler reaction which group is substituted by the allylic hydrogen atom of alkene -

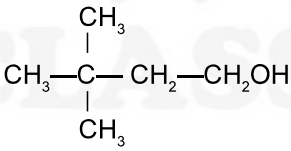
[1] —OH [2] $—NH_2$ [3] —Br [4] —COOH

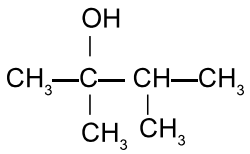
Q.24 Which of the following reagent converts the propene to 1-propanol -

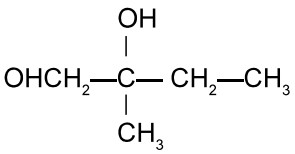
[1] H_2O, H_2SO_4 [2] aqueous KOH [3] $MgSO_4$, $NaBH_4/H_2O$ [4] B_2H_6, H_2O_2, OH^-

Q.25 The product of the following reaction  -

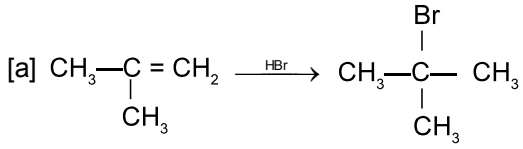
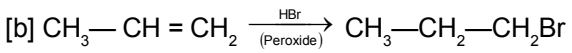
[1] 

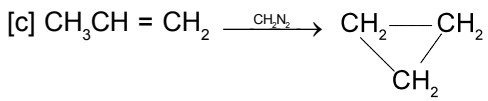
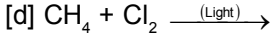
[2] 

[3] 

[4] 

Q.26 Review the following reactions and choose reactions which are completed by free radical mechanism -

[a]  [b] 

[c]  [d] 

Correct answer is :

[1] b, c, d [2] a, c [3] a, d [4] a, b

Q.27 Which of the unsaturated compound react with sodamide -

[1] 2-butyne [2] 1-butene [3] 2-buteen [4] 1-butyne

Q.28 Reagent can apply for the formation of chloroprene from acetylene -

[1] $Cu(NH_3)_2$ and HCl [2] Cu_2Cl_2 and O_2 [3] $Ni(CO)_4$ [4] $Ni(CO)_4$ and $(C_6H_5)_3P$

Q.29 $CH \equiv CH + CO + H_2O \xrightarrow{Ni(CO)_4}$ Product, for this reaction which statement is false -

[1] The product of reaction is a α, β -unsaturated acid

[2] In reaction the addition of Hydrogen and carboxylic group at π bond

[3] The product name in this reaction is acrylic acid

[4] The product react with ethyl alcohol give ethyl butanoate

Q.30 $A \xrightarrow{Electrolysis} B \xrightarrow[BF_3.HgO]{CH_3OH}$ Methylal, [A] is -

[1] Potassium formate [2] Potassium acetate [3] Sodium succinate [4] Sodium fumarate

Answer Key

Qus.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	1	2	4	3	1	1	4	4	1	4	2	3	4	2	3	2	1	3	1	3
Qus.	21	22	23	24	25	26	27	28	29	30										
Ans.	2	2	3	4	1	1	4	1	4	4										