Date Planned : __ / __ / __	Daily Tutorial Sheet-3	Expected Duration : 45 Min
Actual Date of Attempt : __ / __ / __	JEE Advanced (Archive)	Exact Duration :_____

31. m-Chlorobenzaldehyde on reaction with conc. KOH at room temperature gives. **(1991)**

(A) potassium m-chlorobenzoate and m-hydroxybenzaldehyde

(B) m-hydroxybenzaldehyde and m-chlorobenzyl alcohol

(C) m-chlorobenzyl alcohol and m-hydroxybenzyl alcohol

(D) potassium m-chlorobenzoate and m-chlorobenzyl alcohol.

32. Give reason in one or two sentences : **(1991)**

"Iodoform is obtained by the reaction of acetone with hypoiodite but not with iodide".

33. Arrange the following in the increasing order of expected enol content. **(1992)**

CH_3COCH_2CHO, CH_3COCH_3, CH_3CHO, $CH_3COCH_2COCH_3$

34. Hydrogenation of benzoyl chloride in the presence of Pd on $BaSO_4$ gives **(1992)**

(A) benzyl alcohol **(B)** benzaldehyde

(C) benzoic acid **(D)** phenol

35. Predict the major product in the following reaction : **(1994)**

$$C_6H_5-CH_2COCH_3 \xrightarrow[(ii)\ H^+]{(i)\ CH_3MgBr\ (excess)}$$

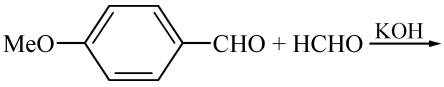
36. In the following reactions, identify the compounds A, B, C and D. **(1994)**

(i) $PCl_5 + SO_2 \longrightarrow A + B$

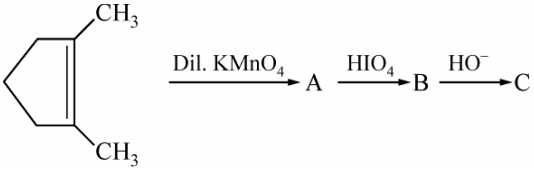
(ii) $A + CH_3COOH \longrightarrow C + SO_2 + HCl$

(iii) $2C + (CH_3)_2Cd \longrightarrow 2D + CdCl_2$

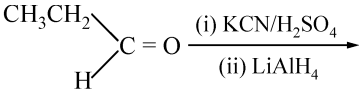
37. Write the structure of the major organic product expected from the following reaction. **(1995)**



38. Suggest appropriate structures for the missing compounds. (the number of carbon atoms remains the same throughout the reaction) **(1996)**

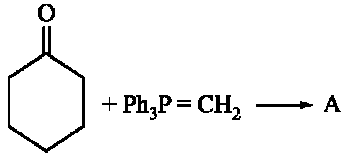


39. Complete the following reaction with appropriate structure : **(1996)**

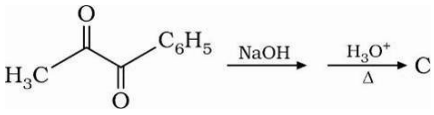


40. Acetophenone on reaction with hydroxylamine hydrochloride can produce two isomeric oximes. Write structures of the oxime. **(1997)**

41. Complete the following, giving the structures of the principal organic products, **(1997)**

(i) 

(ii) $ClCH_2CH_2CH_2COPh + KOH + MeOH \longrightarrow B$

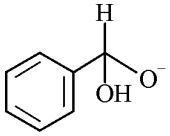
(iii) 

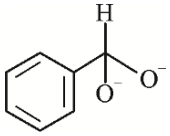
(iv) $R - \underset{\underset{O}{\|}}{C} = C - R + HClO_4 \longrightarrow D$ [R = n - Pr]

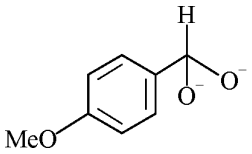
42. A hydrocarbon A (molecular formula C_5H_{10}) yields 2-methylbutane on catalytic hydrogenation. A adds HBr (in accordance with Markovnikov's rule) to form a compound B which on reaction with silver hydroxide forms an alcohol C, $C_5H_{12}O$. Alcohol C on oxidation gives a ketone D. Deduce the structures of A, B, C and D and a ketone D. Deduced the structures of A, B, C and D and show the reactions involved. **(1997)**

43. How many asymmetric carbon atoms are created during the complete reduction of benzil in (PhCO – COPh) with $LiAlH_4$? Also write the number of possible stereoisomers in the product. **(1997)**

44. In a Cannizzaro reaction, the intermediate that will be the best hydride donor is: **(1997)**

(A) 

(B) 

(C) 

(D)