Vidyamandir Classes
Gurukul for IITJEE & Medical Preparation

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

31. Kolbe's electrolysis of potassium succinate gives CO_2 and _____ at anode. **(1993)**

32. Give the structures of A & B (explanation are not required) **(1993)**

(i) $A(C_4H_8)$ which adds on HBr in the presence and in the absence of peroxide to give same product.

(ii) $B(C_4H_8)$ which when treated with H_2O/H_2SO_4 gives $C_4H_{10}O$, which cannot be resolved into optical isomers.

33. When gas A is passed through dry KOH at low temperature, a deep red coloured compound B and a gas C are obtained. The gas A, on reaction with but-2-ene, followed by treatment with Zn/H_2O yields acetaldehyde. Identify A, B and C. **(1994)**

34. Write down the structure of the stereoisomers formed when cis-2-butene is reacted with bromine. **(1995)**

35. An organic compound $E(C_5H_8)$ on hydrogenation gives compound $F(C_5H_{12})$. Compound E on ozonolysis gives formaldehyde and 2-keto propanal. Deduce the structure of compound E. **(1995)**

36. An alkyl halide, X, of formula $C_6H_{13}Cl$ on treatment with potassium tertiary butoxide gives two isomeric alkenes Y and $Z(C_6H_{12})$. Both alkenes on hydrogenation give 2, 3-dimethyl butane. Predict the structures of X, Y and Z. **(1996)**

37. Give the structure of the major organic products obtained from 3-methyl-2-pentene under each of the following reaction conditions : **(1996)**

(a) HBr in the presence of peroxide

(b) Br_2/H_2O

(c) $Hg(OAc)_2/H_2O$, $NaBH_4$

38. $(CH_3)_3CMgCl$ on reaction with D_2O produces : **(1997)**

(A) $(CH_3)_3CD$ **(B)** $(CH_3)_3COD$ **(C)** $(CD_3)_3CD$ **(D)** $(CD_3)_3COD$

39. When cyclohexane is poured on water, it floats because : **(1997)**

(A) cyclohexane is in 'boat' form **(B)** cyclohexane is in 'chair' form

(C) cyclohexane is in 'crown' form **(D)** cyclohexane is less dense than water

40. 1, 3-butadiene with bromine in molar ratio of 1 : 1 generate predominantly_____. **(1997)**

41. The hydrocarbon A, adds one mole of hydrogen in the presence of a platinum catalyst to form n-hexane. When A is oxidized vigorously with $KMnO_4$, a single carboxylic acid, containing three carbon atoms, is isolated. Give the structure of A and explain. **(1997)**

42. Benzyl chloride $(C_6H_5CH_2Cl)$ can be prepared from toluene by chlorination with : **(1998)**

(A) SO_2Cl_2 **(B)** $SOCl_2$ **(C)** Cl_2 **(D)** NaOCl