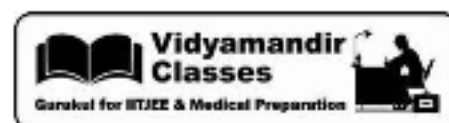




1

of 2



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)** $\text{A}(\text{C}_4\text{H}_8)$ which adds on HBr in the presence and in the absence of peroxide to give same product.
- (ii)** $\text{B}(\text{C}_4\text{H}_8)$ which when treated with $\text{H}_2\text{O}/\text{H}_2\text{SO}_4$ gives $\text{C}_4\text{H}_{10}\text{O}$, 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 $\text{Zn}/\text{H}_2\text{O}$ 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 $\text{E}(\text{C}_5\text{H}_8)$ on hydrogenation gives compound $\text{F}(\text{C}_5\text{H}_{12})$. Compound E on ozonolysis gives formaldehyde and 2-keto propanal. Deduce the structure of compound E. **(1995)**
- 36.** An alkyl halide, X, of formula $\text{C}_6\text{H}_{13}\text{Cl}$ 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)** $\text{Br}_2/\text{H}_2\text{O}$
- (c)** $\text{Hg}(\text{OAc})_2/\text{H}_2\text{O}, \text{NaBH}_4$
- 38.** $(\text{CH}_3)_3\text{CMgCl}$ on reaction with D_2O produces : **(1997)**
- (A)** $(\text{CH}_3)_3\text{CD}$ **(B)** $(\text{CH}_3)_3\text{COD}$ **(C)** $(\text{CD}_3)_3\text{CD}$ **(D)** $(\text{CD}_3)_3\text{COD}$
- 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 ($\text{C}_6\text{H}_5\text{CH}_2\text{Cl}$) can be prepared from toluene by chlorination with : **(1998)**
- (A)** SO_2Cl_2 **(B)** SOCl_2 **(C)** Cl_2 **(D)** NaOCl