



- 69.** Amongst the following compound, the optically active alkane having lowest molecular mass : **(2004)**
- (A)
- (B)
- (C)
- (D)
- 70.** 1-bromo-3-chlorocyclobutane when treated with two equivalents of Na, in the presence of ether which of the following will be formed ? **(2005)**
- (A)
- (B)
- (C)
- (D)
- 71.** Cyclohexene is best prepared from cyclohexanol by which of the following ? **(2005)**
- (A) conc.  $\text{H}_3\text{PO}_4$  (B) conc.  $\text{HCl} / \text{ZnCl}_2$  (C) conc.  $\text{HCl}$  (D) conc.  $\text{HBr}$
- 72.** Monomer A of a polymer on ozonolysis yields two moles of  $\text{HCHO}$  and one mole of  $\text{CH}_3\text{COCHO}$ . **(2005)**
- (a) Deduce the structure of A
- (b) Write the structure of all cis form of polymer of compound A
- 73.** 2-methylbutane on reacting with bromine in the presence of sunlight gives mainly : **(2005)**
- (A) 1-bromo-2-methylbutane (B) 2-bromo-2-methylbutane
- (C) 2-bromo-3-methylbutane (D) 1-bromo-3-methylbutane
- 74.** Reaction of one molecule of  $\text{HBr}$  with one molecule of 1,3-butadiene at  $40^\circ\text{C}$  gives predominantly : **(2005)**
- (A) 3-bromobutene under kinetically controlled conditions
- (B) 1-bromo-2-butene under thermodynamically controlled conditions
- (C) 3-bromobutene under thermodynamically controlled conditions
- (D) 1-bromo-2-butene under kinetically controlled conditions
- 75.** Of the five isomeric hexanes, the isomer which can give only two monochlorinated compounds is : **(2005)**
- (A) n-hexane (B) 2, 3-dimethylbutane
- (C) 2,2-dimethylbutane (D) 2-methylpentane