



- (iii) Draw and name the conformers of hexachloro cyclohexane. Which conformer possesses optical activity?
- (iv) What is conformation? Discuss conformation analysis of Cyclo propane, 1,2 dimethyl cyclo butane and 1,3 ditertiary butyl cyclohexane.
- 3 Answer any two : 14
- (i) Explain position of keto group and methyl group in Oestrone.
- (ii) Discuss the constitution- chemistry of Lanosterol.
- (iii) Give the synthesis of progesterone from diosgenin.
- (iv) Write a note on Adrenocortical hormones.
- 4 Answer any two : 14
- (i) Discuss  $^1\text{H}$ - $^{13}\text{C}$  HETCOR NMR spectrum of 1-chloro-2-propanol.
- (ii) Giving examples explain uses of NMR shift reagents.
- (iii) Describe DQF  $^1\text{H}$ - $^1\text{H}$  cosy spectra of lpsenol.
- (iv) Write note on Nuclear Overhauser effect.
- 5 Answer any seven : 14
- (i) Give helical structure of DNA.
- (ii) How Oestrone is converted to Oestriol?
- (iii) Give accounts on Sterols.

- (iv) Give observation : X-ray analysis of a-amylose-iodine is done.
- (v) What is limit dextrin ?
- (vi) What is nucleic acids?
- (vii) Draw the structures of Cytosine, Purine, Guanine and Thymine.
- (viii) What is  $^1\text{H}$ - $^1\text{H}$  shift correlated spectroscopy ?
- (ix) Draw the structure of bicycle [2, 2, 2] octane and bicycle [2, 1, 1] hexane.
- (x) What is TOCSY spectrum? Give example.
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