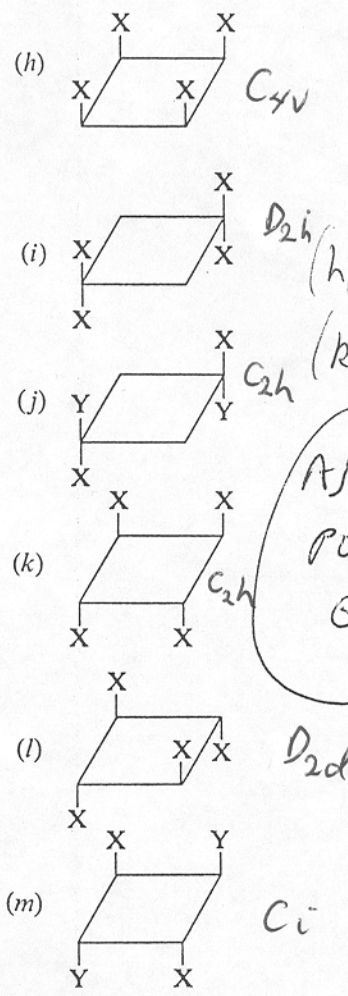
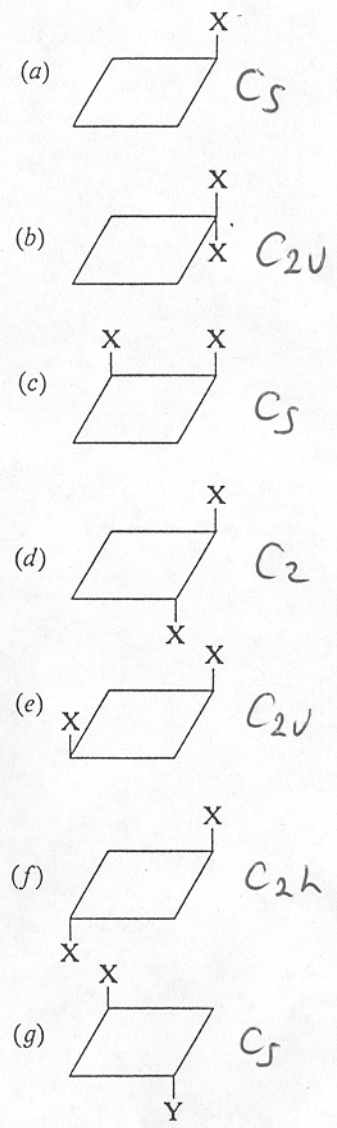


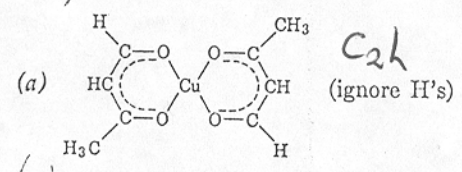
3.7



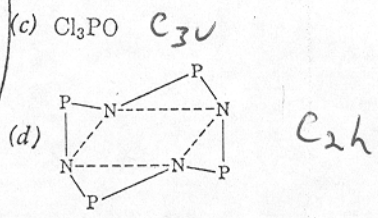
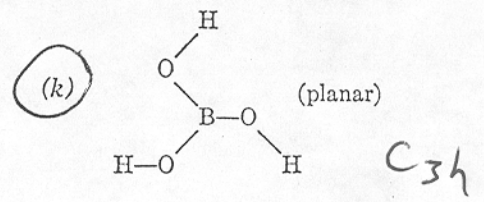
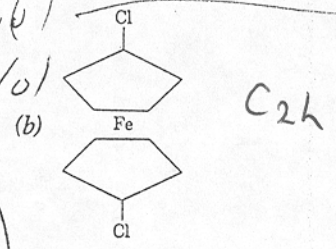
ANSWER POINT GROUP

Do. 3.9 (a) to (m) AND 3.12

3.12 Determine the point group of each of the following molecules or objects:

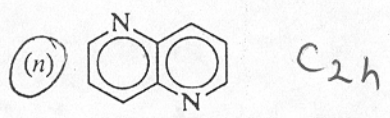
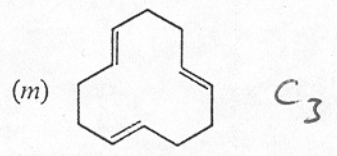


- (g) 1,3,5-trichlorobenzene D_{3h}
- (b) $trans-Pt(NH_3)_2Cl_2$ (ignore H's) D_{2h}
- (i) SF_5Cl C_{4v}
- (j) $BFCIBr$ C_s



- (e) Tennis ball (including the seam) D_3
- (f) $trans-[CrCl_2(H_2O)_4]^+$ (ignore H's) D_{4h}

(l) Spiropentane



(o) A wineglass of the usual stemware type $C_{\infty v}$

3.10 What is the point symmetry of each of the four distinct geometric isomers of an ethane-like, staggered molecule $XYZC-CXYZ$? Which ones are dissymmetric?

3.11 Draw structural formulae for all geometric isomers of "octahedral" complexes of the type $MA_2B_2C_2$. State the point group of each, and identify those which are dissymmetric.