**Topic 16 Exercise 2 – Optical Isomerism**

1. Draw all the possible structural isomers of C5H11Br (there are 8 in total). Label the isomers A – H and name them.

a) Identify two molecules which are positional isomers.

b) Identify two molecules which are chain isomers.

c) Identify two molecules which are chiral and draw the two optical isomers of each. Explain briefly how they could be distinguished.

2. State whether the following preparations will produce a racemate or a single enantiomer:

a) butan-2-ol from but-2-ene

b) butan-2-ol from 2-bromobutane

c) 2-hydroxybutanenitrile from propanal