



### Topic 16 Exercise 2 – Optical Isomerism

1. Draw all the possible structural isomers of  $C_5H_{11}Br$  (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

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