Chapter Summary Worksheet

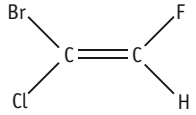
Chapter 6 Isomerism

Print out and complete this worksheet to generate a summary for Chapter 6.

1 The number of non-cyclic stereoisomers of C_5H_{10} is:

- ☐ **A** 2
- ☐ **B** 3
- ☐ **C** 4
- ☐ **D** 6

2 Which is the name of the following compound?



- ☐ **A** *cis*-1,1-bromochloro-2-fluoroethene
- ☐ **B** *trans*-1,1-bromochloro-2-fluoroethene
- ☐ **C** *E*-1,1-bromochloro-2-fluoroethene
- ☐ **D** *Z*-1,1-bromochloro-2-fluoroethene

3 One optical isomer of 2-chlorobutane rotates the plane of plane-polarised light in a clockwise direction. It reacts with ammonia in an S_N1 mechanism. The product will rotate the plane of plane-polarised light:

- ☐ **A** clockwise
- ☐ **B** anticlockwise
- ☐ **C** in neither direction as the product is not chiral
- ☐ **D** in neither direction as a racemic mixture is obtained

4 One optical isomer of chlorofluoromethylamine, $CHClFNH_2$, rotates the plane of plane-polarised light in a clockwise direction. It reacts with ammonia in an S_N2 mechanism. The product will rotate the plane of plane-polarised light:

- ☐ **A** clockwise
- ☐ **B** anticlockwise
- ☐ **C** in neither diection as the product is not chiral
- ☐ **D** in neither diection as a racemic mixture is obtained

5 The number of stereoisomers of 4-hydroxypent-2-ene, $CH_3CH{=}CHCH(OH)CH_3$ is

- ☐ **A** 2
- ☐ **B** 4
- ☐ **C** 6
- ☐ **D** 8

6 The number of stereoisomers of butane-2-3-diol, $CH_3CH(OH)CH(OH)CH_3$ is

- ☐ **A** 1
- ☐ **B** 2
- ☐ **C** 3
- ☐ **D** 4

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