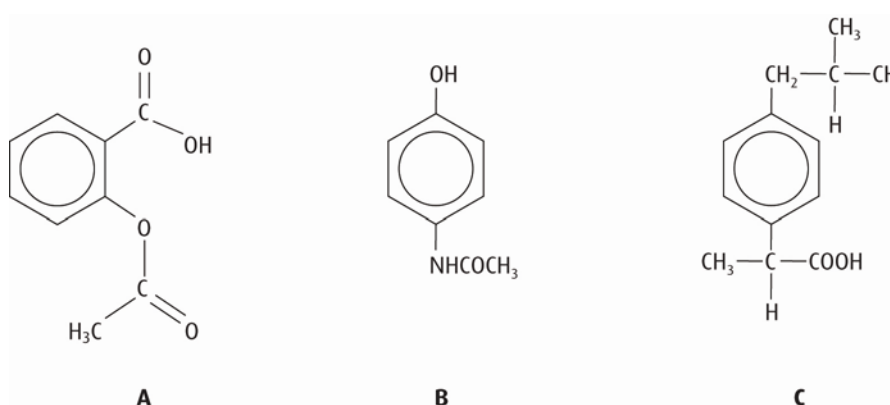
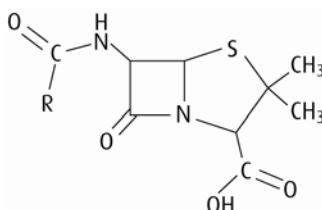


Core Worksheet – Option D

- 1 Explain what is meant by the following terms:
- a therapeutic window [1]
 - b side effect. [1]
- 2 Magnesium hydroxide, aluminium hydroxide and sodium hydrogencarbonate may all be used as antacids.
- a Write equations for the reactions of each of these antacids with stomach acid. [6]
 - b 500 mg of each antacid is administered. Deduce which will neutralise the most stomach acid. [3]
- 3 The structures of three analgesics are shown below.



- a Explain what is meant by the term **analgesic**. [1]
 - b Identify, using the appropriate letters, which of structure(s) A, B or C contain the following functional groups: [3]
 - i amide
 - ii carboxylic acid
 - iii ester
 - c Explain how a mild analgesic works. [1]
- 4 The basic structure of penicillin is shown below.



- a Explain how penicillins work. [2]
- b Explain the importance of modifying the side chain, R. [2]