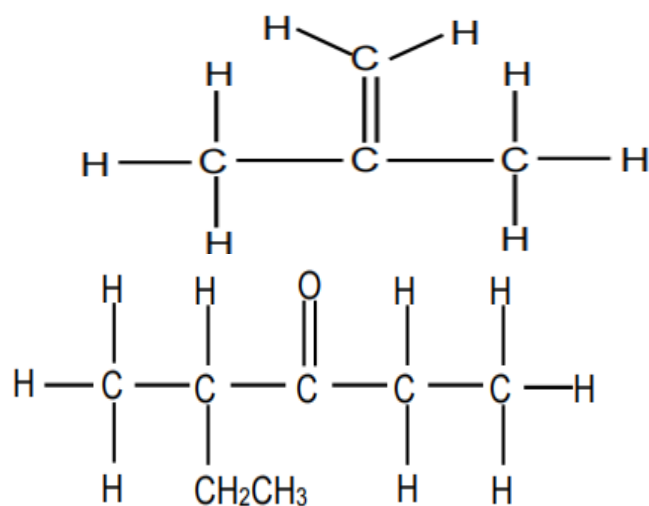




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ORGANIC CHEMISTRY

The letters A to E in the table below represent five organic compounds.

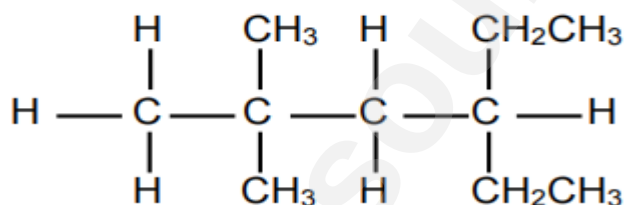


A

B

C. But-2-ene

D. 2-methylbutanoic acid



E

3.1 Write down the:

3.1.1 NAME of the functional group of compound E.

(1)

3.1.2 Homologous series to which compound C belongs.

(1)

3.2 Write down the IUPAC name of:

3.2.1 Compound C.

(2)

3.2.2 Compound D.

(2)

3.3 Write a balanced equation for the complete combustion of compound

E.(3)

3.4 Write down the structural formula of:

3.4.1 Compound D.

(2)

3.4.2 A CHAIN ISOMER of compound A

(2)

3.5 A laboratory assistant uses bromine water to distinguish between compounds C and E. She adds bromine water to a sample of each in two different test tubes. She observes that the one compound decolourises the bromine water immediately, whilst the other one only reacts after placing the test tube in direct sunlight. Write down the:

2.5.1 Letter (C or E) of the compound that will immediately decolourise the bromine water.

(1)

2.5.2 Name of the type of reaction that takes place in the test tube containing compound C.

(1)

2.5.3 Structural formula of the organic product formed in the test tube containing compound C.

(2)

[17]