

Chemistry

Section I (continued)

Part B – 60 marks

Attempt Questions 16–27

Allow about 1 hour and 45 minutes for this part

Answer the questions in the spaces provided.

Show all relevant working in questions involving calculations.

Marks

Question 16 (6 marks)

You have carried out a first-hand investigation to compare the reactivity of an alkene with its corresponding alkane.

- (a) State the name of the alkene. 1

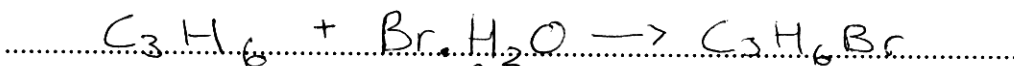
~~Pentane~~ Propene

- (b) Outline a procedure to compare the reactivity of this alkene with its corresponding alkane. 2

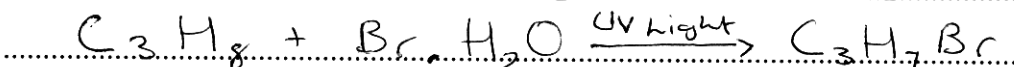
By adding Bromine water a distinct result occurs in the alkene, because of the double bond the Bromine is immediately absorbed hence the brown bromine water turns clear, whilst it remains brown in

- (c) Describe the results obtained from this first-hand investigation and include relevant chemical equations. 3

We added ~~Pentane~~ ^{Propene and} Bromine water



We added ~~Pentane~~ ^{Propane} and Bromine water



No result was achieved originally with ~~Pentane~~ so UV light was used as a ^{Propane} catalyst however

the reaction did not proceed at same speed as propene

the Alkane as it has no double bond and hence is less reactive