

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.

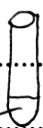
1

cyclohexene

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

2

1. set up:



2 test tubes - same sized

cyclohexene

cyclohexane

make sure the volume is the same for both

2. add 10 ml bromine solution to each tube.

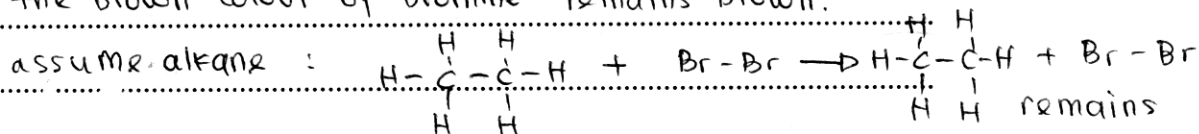
3. shake it a bit, don't expose them to sun light.

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

3

* ~~#~~ the test tube containing cyclohexane:

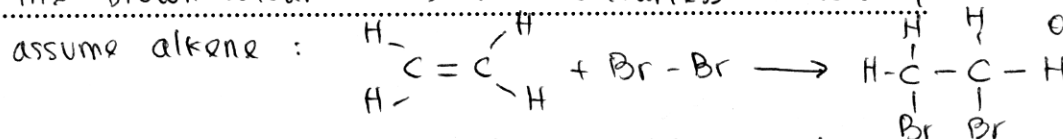
the brown colour of bromine remains brown.



remains the same,

* the test tube containing cyclohexene:

the brown colour turns into colourless indicating a chemical reaction occurred.



the double bond of an alkene is very reactive and ~~the~~ Br_2 is readily joined. \therefore Alkene is more reactive than alkane.