

Combined Science
PAPER 5
Foundation Tier

Tuesday 11 June 2024 – Morning

Time: 1 hour 10 minutes

Diagram Booklet

THIS DIAGRAM BOOKLET MUST BE RETURNED WITH THE QUESTION PAPER AT THE END OF THE EXAMINATION.

In the boxes below, write your name, centre number and candidate number.

Surname					
Other names					
Centre Number					
Candidate Number					

INSTRUCTIONS

There may be spare copies of some diagrams in case you need them.

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Spare Copies

14	Question 2(b)(iv)
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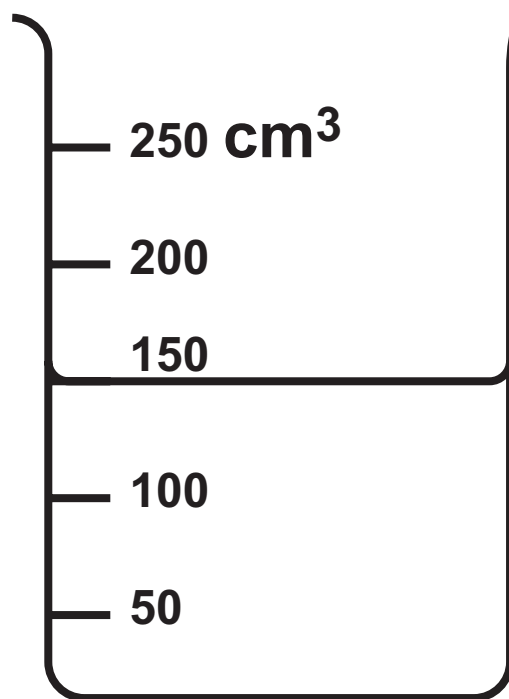
Question 1(a)

FIGURE 1

symbol	atomic number	melting point in °C
Na	11	98
Mg	12	650
Al	13	660
Si	14	1410
P	15	44
Cl	17	−101
Ar	18	−189

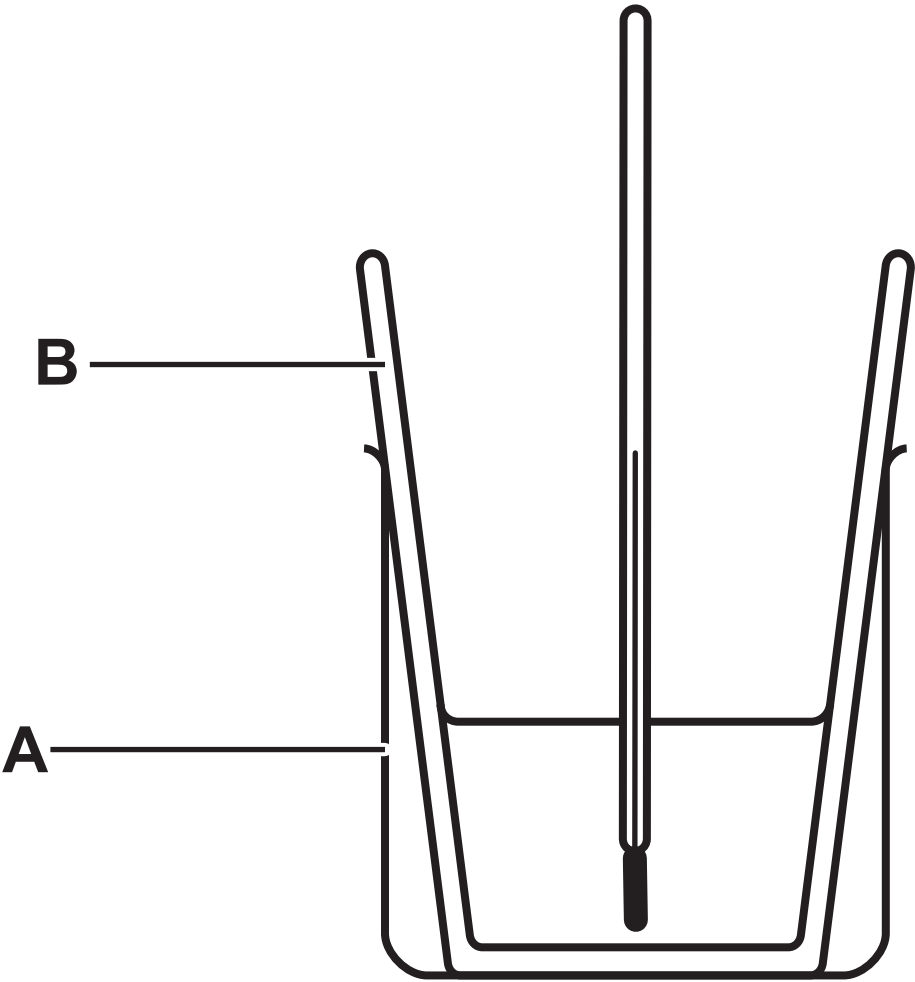
Question 1(b)

FIGURE 2



Question 2(b)

FIGURE 3



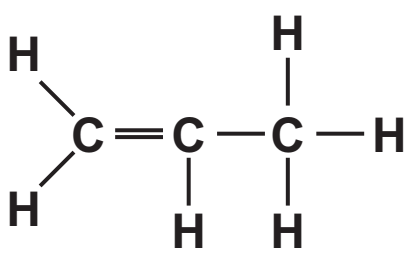
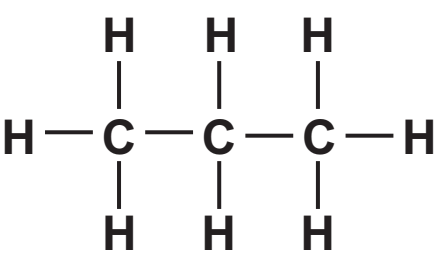
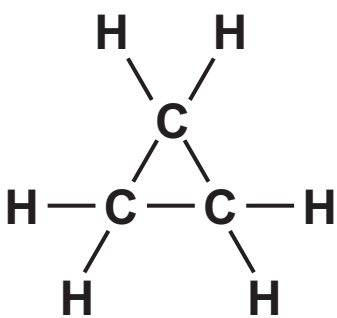
Question 2(b)(iv)

FIGURE 4

	salt P	salt Q	salt R	salt S
starting temperature in °C	20·0	20·0	20·0	20·0
final temperature in °C	22·4	19·5	23·0	18·5
temperature change in °C	+2·4	−0·5		
salt that absorbed most heat energy when it dissolved				

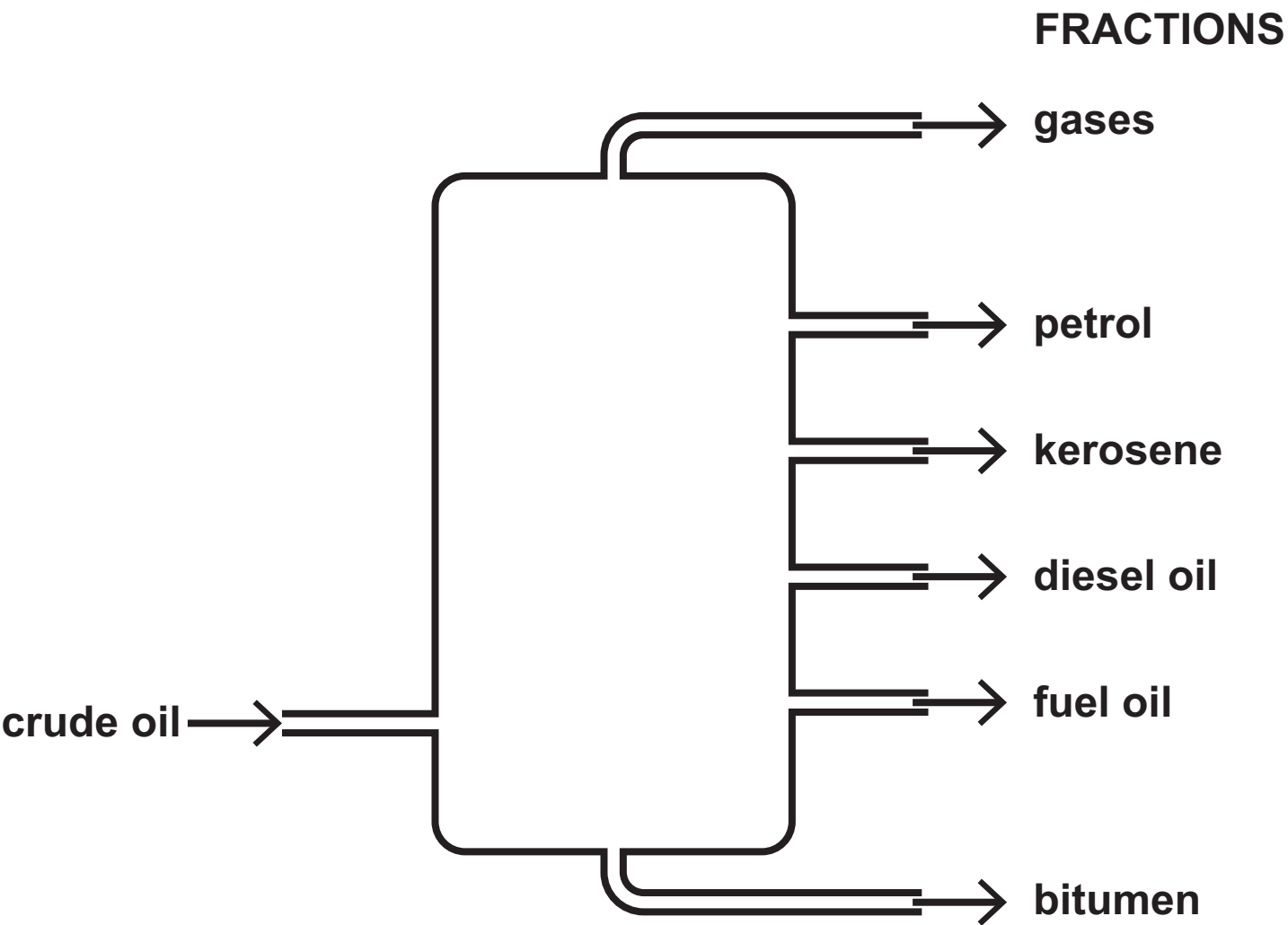
Question 3(a)

FIGURE 5

X	Y	Z
		

Question 3(b)

FIGURE 6



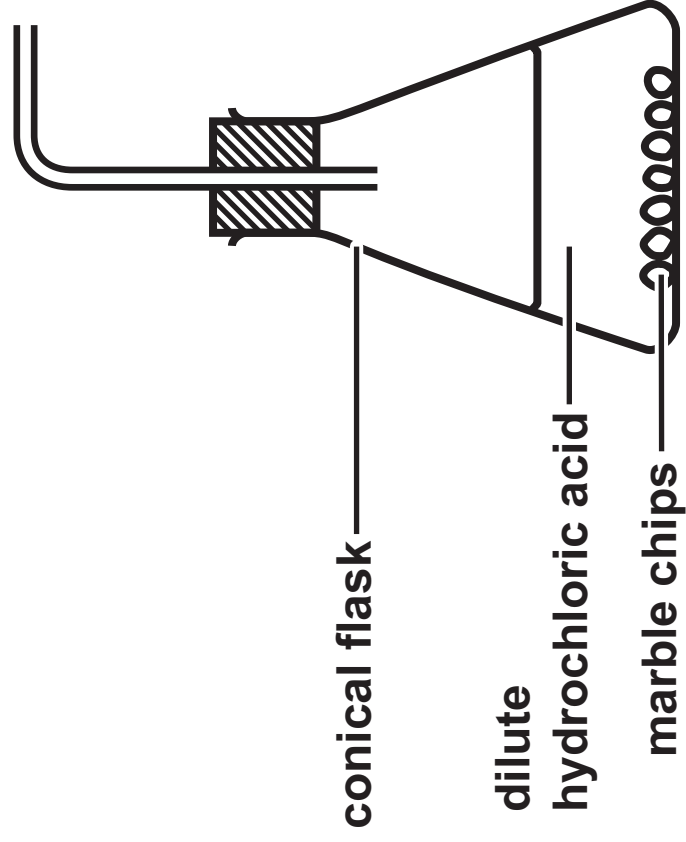
_____ + _____ ↑ _____

Question 4(c)

FIGURE 7

halogen	relative speed of reaction
fluorine	
chlorine	reacts very quickly
bromine	reacts quickly
iodine	reacts slowly

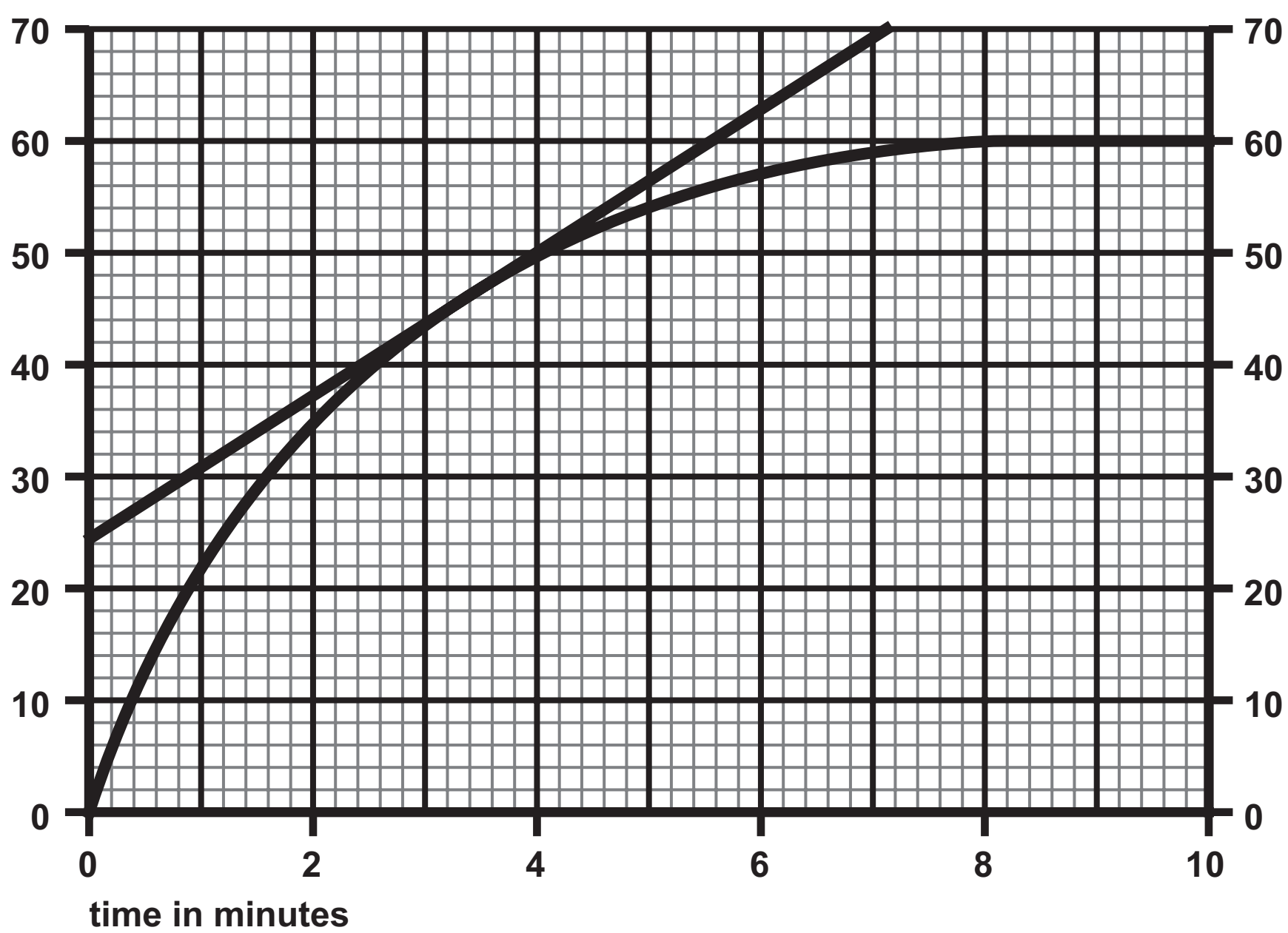
FIGURE 8



Question 5(b)

FIGURE 9

volume of carbon dioxide
in cm^3



Question 6(d)

FIGURE 10

period of time	plant life	amount of carbon dioxide in atmosphere	amount of oxygen in atmosphere
the earliest Earth	no plant life	very high	none
about 3,500 million years ago	plant life evolved	high	very low
about 10,000 years ago	about 60% of land covered by trees	0·03%	about 21%
today	less than 40% of land covered by trees	0·04%	about 21%

Question 2(b)(iv)

FIGURE 4

	salt P	salt Q	salt R	salt S
starting temperature in °C	20·0	20·0	20·0	20·0
final temperature in °C	22·4	19·5	23·0	18·5
temperature change in °C	+2·4	−0·5		
salt that absorbed most heat energy when it dissolved				

_____ + _____ → _____

FIGURE 8

