



COMBINED SCIENCE

0653/52

Paper 5 Practical Test

May/June 2017

MARK SCHEME

Maximum Mark: 30

Published

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Question	Answer	Marks
1(a)	quality drawing in pencil using at least half the space ; male parts, anther and filament drawn ; female parts, stigma and ovary drawn ; petals drawn ;	4
1(b)(i)	line drawn edge to edge ; correct measurement of drawing and sensible flower measurement ;	2
1(b)(ii)	correct calculation ;	1
1(c)	benedict's solution; heat; orange / red indicates more sugar or yellow / green indicates less sugar ;	3

Question	Answer	Marks
2(a)(i)	temperature recorded and within 5°C of supervisor's value ; both volumes recorded and $V_2 > V_1$;	2
2(a)(ii)	temperature recorded for experiment 2 and 8–12 °C above the temperature for experiment 1 ; both volumes recorded and both greater than those in (a)(i) ;	2
2(a)(iii)	temperatures for experiment 3 recorded and to nearest half degree ; V_1 and V_2 for experiment 3 greater than V_1 and V_2 for experiment 2 ;	2
2(b)(i)	all values of V correct ;	1
2(b)(ii)	the higher the temperature the higher the rate of the reaction ;	1

Question	Answer	Marks
2(c)	bubble into water ; count bubbles in a certain time / time for certain number of bubbles ; or connect delivery tube to a gas syringe ; measure volume in a certain time / time for a certain volume ; or place reaction flask on a balance ; measure mass (decrease) in a certain time / time for certain drop in mass ;	2

Question	Answer	Marks
3(a)(i)	m present and to 0.1 g ;	1
3(a)(ii)	V_1 present and 65 ± 5 (cm ³) ;	1
3(a)(iii)	V_2 present ; $V_2 > V_1$;	2
3(a)(iv)	calculation correct ;	1
3(a)(v)	calculation correct and 2 / 3 sig fig ; g / cm ³ ;	2
3(b)(i)	any 2 from ; not reading to bottom of meniscus not reading perpendicular to scale of measuring cylinder / not eye level test tube touching the side of cylinder / how the test-tube floats zero error on balance	max 2
3(b)(ii)	state effect on V or m and hence effect on d_2 ;	1