Y7SID_carr_alexander-4507

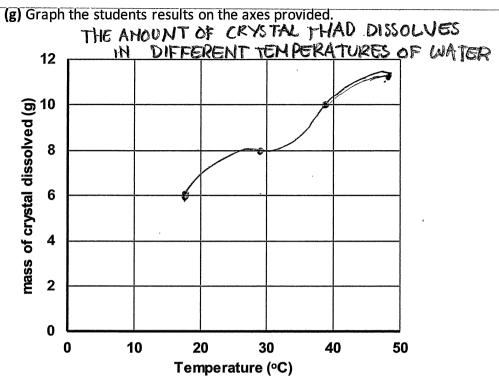
| Part II | - |
|--|--|
| 27 marks Attempt Questions 16-19. Allow about 35 minutes for this section | |
| Question 16 (15 marks) | Marks |
| The paragraph below is a student's write-up of a | an experiment. |
| 1. I put 100 mL of water in a test tube and means some of the crystals in it and stirred the mixture some remained on the bottom of the tube no means amount of solid left behind and found that 6.0 gets. Then I did it again but this time I heated the westripod while the thermometer was suspended for that 8.0 gets. dissolved. 4. I repeated it at 40°C and at 47°C and got 10.00°C. | e to dissolve the crystals. I kept stirring until atter how much longer I stirred. I the water from the solution. I weighed the had been dissolved. water using a Bunsen burner, gauze mat and form a retort stand using water at 29°C. I found |
| (a) Write an aim appropriate for the experi | ment. 1 |
| | uperature of the water affects how much |
| (b) \ Complete the table for the student's res | ults. Amount Of crystal disolved (9) |
| 18.00 | 6109 |
| 290 C | 8,09 |
| 4000 | 10.09 |
| 4700 | 11.29 |
| | <u>-</u> |

(c) Identify the independent and dependent variable for this experiment.

Dependant: the temperature of the water

Independant: the crystals in the water

| | (e) Draw a labelled scientific diagram showing the equipment set up required to carry out start as described above. | ер 3 |
|------------------|---|----------------|
| | Clowb | |
| | Boss head Thermometer - Goode Goode | max (250m |
| | Test tobe | V/N 609 |
| | | The pripar |
| , | Canorio Canorio | |
| ુમ ^{ું} | | rack bur |
| fort star | nd | YOUR BUT |
| | | |
| | crystals liquid | |
| | (f) Identify two safety issues the student will have to be concerned with through this experiment. | 2 |
| | They would have to turn the burner off when the are not using it. | • |
| | They would have to wear safety glasses when using bursen Burner | |



| (h) | (h) Write a conclusion for the experiment. | | 1 | |
|-------|--|---------------------------|--------------------------------|------|
| ••••• | the higher the | temperative was, the more | orystal that gets dissolved in | .Hne |
| | test tube | | | |

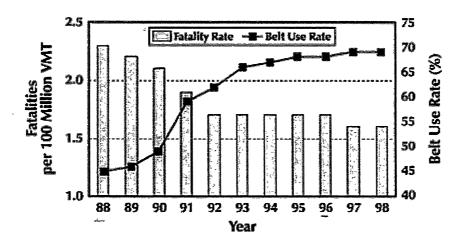
Question 17 (4 marks)

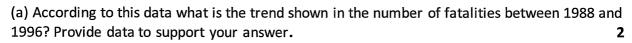
The following scientists are working in different branches or disciplines of science. Identify which branch each is working in:

| Activity | Branch of Science |
|---|----------------------------------|
| Paris is studying the crystals embedded in a rock. | Geology |
| Beau is developing a new type of plastic | -cinemat ry Chemistry |
| Shaun is investigating the eating habits of insects | entendogy Entemology |
| Angus is monitoring the movement of an asteroid | astronomy. |

Question 18. (4 marks).

The graph shows information about road fatalities and the use of seat belts in cars.





from # 1988-1996 the Galattes have massively reduced as the use of seatbelts go up almost by 500%.

(b) Analyse the data presented and provide reasons for the conclusion you made.

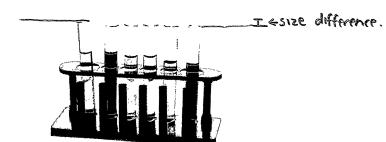
on you made. 2

I gave a conclusion like this because from 1988 to 1996, the crashes veduced by 600,000 (approx) and the use of seatbelts during

the same period of time ovent up by 25%.

Question 19. (4 marks).

The drawing made by a scientist was twice as big as the real size of the object. Determine the actual length of the whole piece of equipment. *Show your working.* **2**



| total length of rack= 4.3 actual size= 4.3 = 2=2.15cm = rack | |
|--|------|
| test tube = 0,4 cm. actual size = 0,4x 0,4 = 2 = 0,2 cm = tu | lbe. |
| b) There are some problems with the equipment diagram above. Identify two things that the scientist needs to change to accurate represent the equipment above. | 2 |
| - same size test tubes -20 drawring | |
| -no colours : | |

END OF EXAM