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	KU	PS
Total Mark		

3700/29/01

NATIONAL
QUALIFICATIONS
2012

MONDAY, 30 APRIL
10.20 AM – 11.35 AM

SCIENCE
STANDARD GRADE
General Level

Fill in these boxes and read what is printed below.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day

Month

Year

Scottish candidate number

Number of seat

1 Answer as many questions as you can.

2 Read the whole of each question carefully before you answer it.

3 Write your answers in the spaces provided. Showing working may help in some questions.

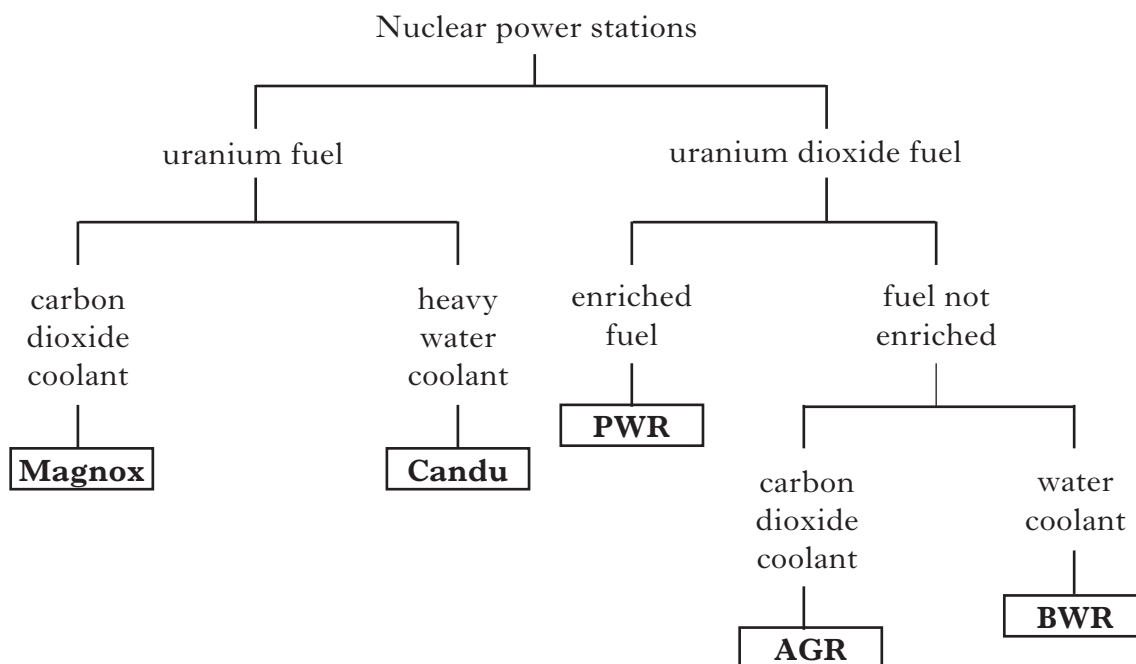
4 Before leaving the examination room you must give this book to the Invigilator. If you do not, you may lose all the marks for this paper.

PB 3700/29/01 6/3410

SQA ©

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- [illegible]



-
-

-
-
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- Marks*



Marks

Marks

- Marks*

- Marks*

Marks

Marks

- Marks*

Marks

Marks

Marks

- [illegible]

water	powder
foam	fire blanket

(a) should be used to put out a fire in an electrical appliance?

(a) should be used to put out a fire in an electrical appliance?

.....

1

(b) must **not** be used to put out a chip pan fire?

.....

1

5. (a) Complete this table by providing suitable headings.

copper gold tin	stone diamond wood

1

- (b) Photograph frames can be made from different types of material.

List **two types** of materials that can be used.

1

2



1

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- [illegible]




1

- A water
- B steam
- C air
- D electricity

Underline the correct answer.

1

[Turn over

- 
- visor

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- 3

to let oxygen get to the cells of the body.

the heart.

to keep blood flowing in one direction.

- 3

<i>Basic need</i>	<i>How humans change the environment</i>
Shelter	Build houses
	Build reservoirs
Warmth	
Food	

[Turn over

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- ## Adding

to steel increases its hardness.

- ## Adding

to steel increases its resistance to corrosion.

- ## Adding

to steel increases its resistance to wear.

3

- | <i>Power station</i> | <i>Generating capacity</i>
(MW) |
|----------------------|------------------------------------|
| Auchben | 660 |
| Benglow | 700 |
| Cairnallan | 400 |
| Dunvetin | 240 |

- Space for working

Answer MW

1

- Space for working

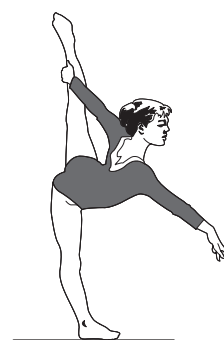
Answer %

1

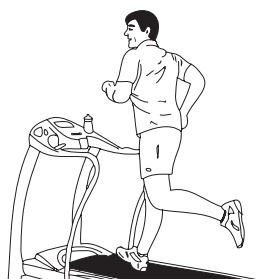
3

1

(a) Being able to bend your body in different ways without feeling sore



(b) Being able to continue exercising for a long time without getting out of breath



[Turn over

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1	kV	2	kWh
3	W	4	A

1

- 1**

Box number

[illegible]

1 oak leaves → earthworm → hedgehog → fox

2 oak leaves → snail → hedgehog → fox

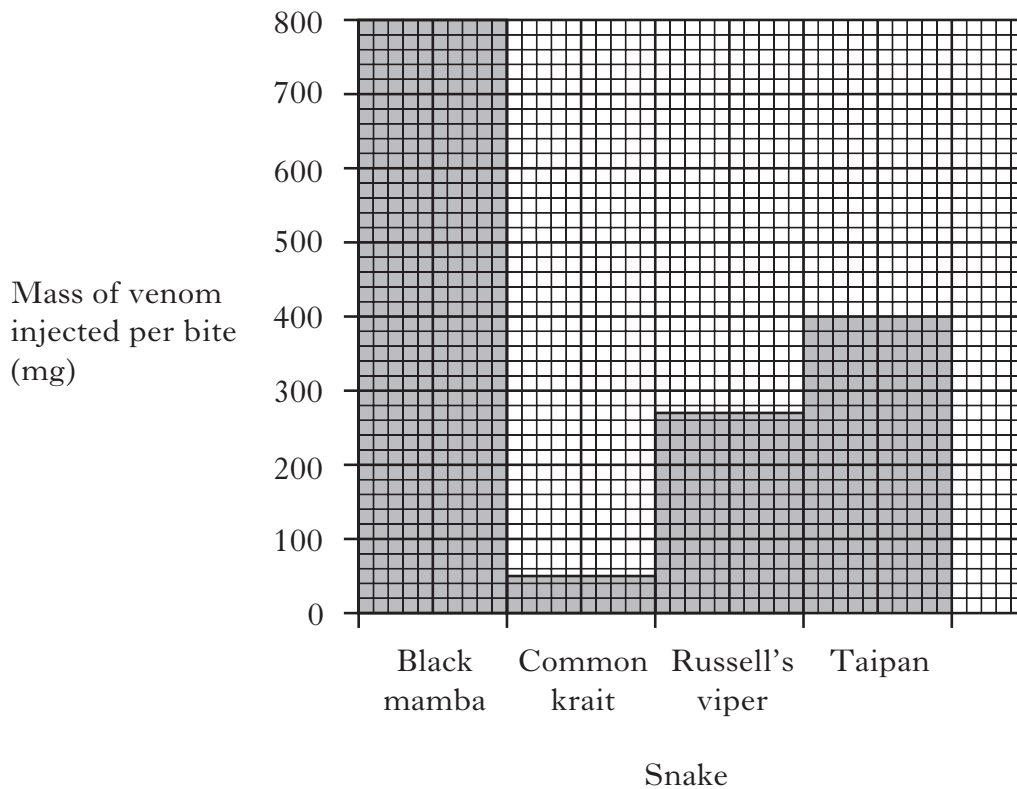
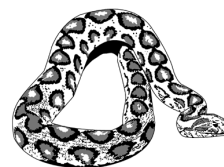
3 oak leaves → vole → stoat → fox

4 oak leaves → vole → fox

```
graph BT; A[oak leaves] --> B1[ ]; A --> B2[ ]; A --> B3[ ]; B1 --> C1[ ]; B1 --> C2[ ]; B2 --> C3[ ]; B2 --> C4[ ]; B3 --> C5[ ]; B3 --> C6[ ]
```

[3700/29/01]

16. The graph shows some information about poisonous snakes.



The table gives some further information about these snakes.

<i>Snake</i>	<i>Where snake is found</i>	<i>Lethal dose of venom (mg)</i>	<i>Death rate of people bitten (%)</i>
Black mamba	Southern Africa	10	95 to 100
Common krait	South East Asia	1	75 to 95
Russell's viper	South East Asia	12	30 to 65
Taipan	Australia	3	25 to 50

[illegible]

(a) Which of the snakes found in South East Asia injects more venom per bite?

1

(b) What is the death rate of people bitten by the snake which injects 50 mg of venom per bite?

..... to %

1

(c) Calculate the number of lethal doses of venom that a Black mamba snake injects in a single bite.

Space for working

Number of lethal doses

2

17. (a) What is normal human body temperature?

..... °C

1

(b) What name is given to the inability to maintain core body temperature?

1

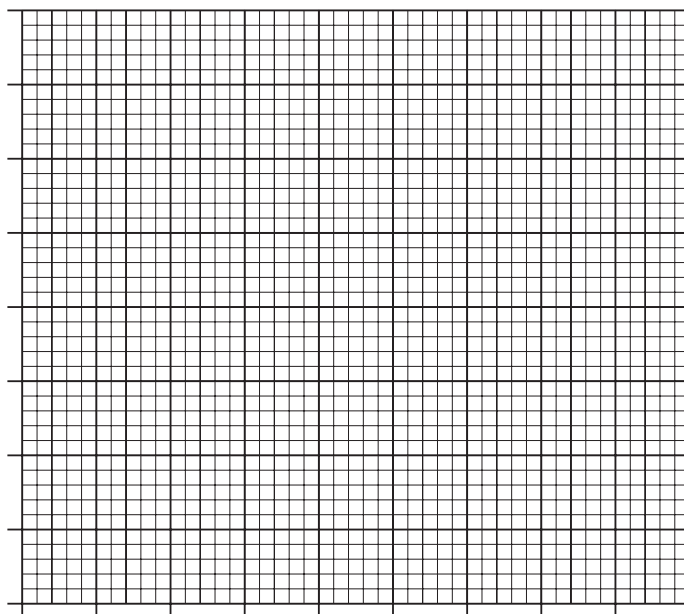
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[illegible]

3

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(a) (i) Name the gas needed for fossil fuels to burn.

1

1

Name another rock formation in which crude oil can be found.

1

refinery gas	petrol	naphtha
paraffin	diesel	bitumen

(i) aviation fuel?

.....

1

.....

1

[Turn over

[illegible]

- Present this information in a table with **three** suitable headings.

Smoking habits of men in the UK

- How are these substances carried from the lungs to other organs in the body?

.....

- Give one example of how a person's alcohol abuse can affect the lives of **other people**.

- $$\begin{array}{ccccc} \text{surface area} & = & \text{length} & \times & \text{breadth} \\ (\text{cm}^2) & & (\text{cm}) & & (\text{cm}) \end{array}$$



Answer cm²

1

- (b) The surface area of water needed for each fish to survive is 50 cm^2 . Calculate the maximum number of fish that can survive in this tank.

Answer.....

1

[Turn over

23. The table below gives information about the value of timber imported into the UK over a five year period.

Marks

<i>Year</i>	<i>Value of timber imported</i> (million pounds)
2005	8 750
2006	9 500
2007	10 100
2008	10 125
2009	10 650

Calculate the average value of timber imported.

Space for working

Answer million pounds

2

24. A group of pupils investigated pollution in a river. They measured the oxygen levels at different parts of the river. Their results are shown below.

<i>Part of river</i>	<i>Oxygen level</i> (units per 10 ml)
A	86
B	25
C	52
D	78

- (a) Which part of the river had the most polluted water?

Part of river

1

- (b) The pupils also surveyed the number and types of invertebrates in the river. How could they use these results to find out which part of the river was **least** polluted?

.....

.....

.....

1

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[illegible]

- 1

- 1

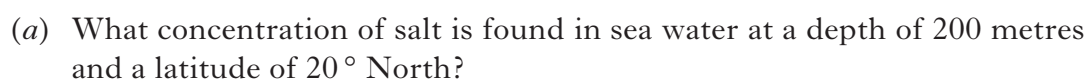
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- Concentration of
salt in sea water
(g/l)



1

.....

- 2

2

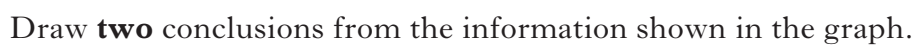
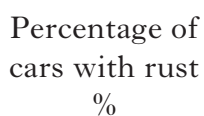
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1

- [Turn over**

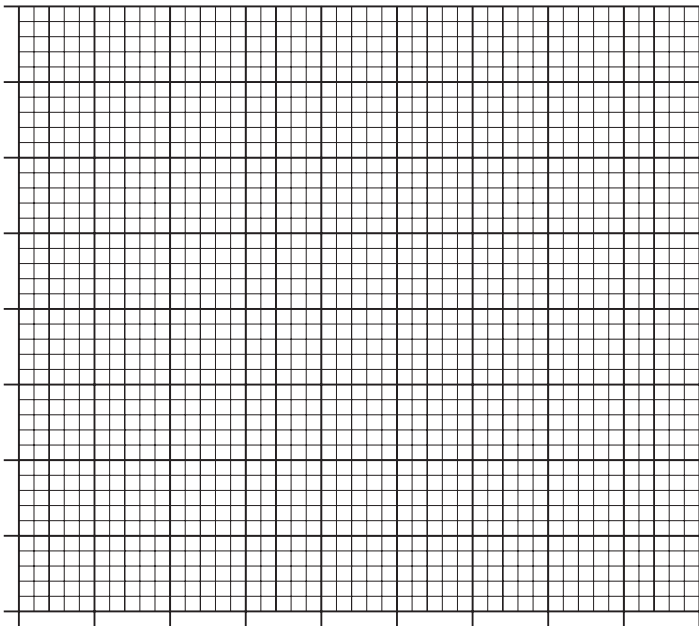
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- 2

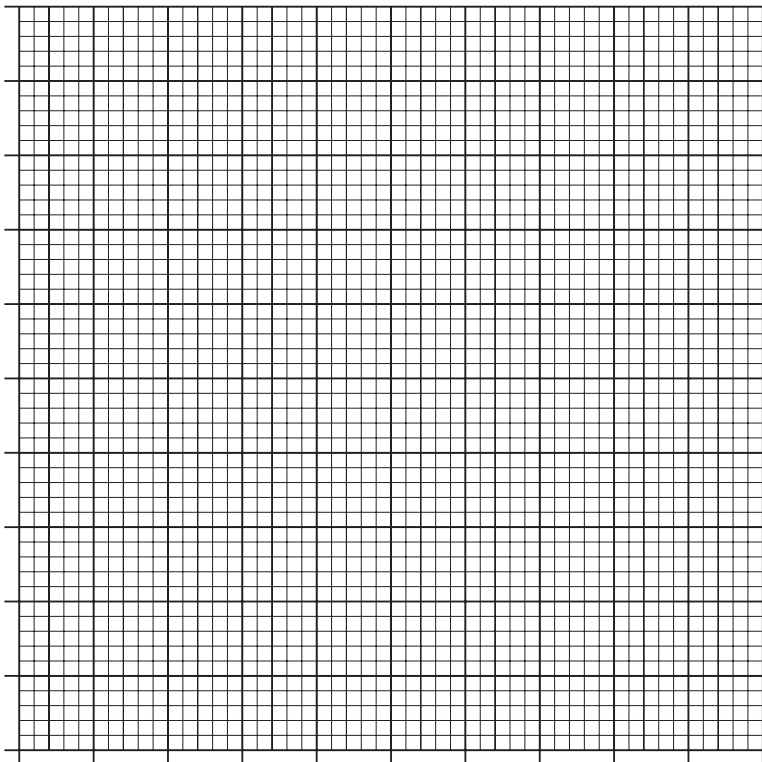


[END OF QUESTION PAPER]

ADDITIONAL GRAPH PAPER FOR USE IN QUESTION 18



ADDITIONAL GRAPH PAPER FOR USE IN QUESTION 27(a)



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