

**SULIT**

NAMA PELAJAR

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TINGKATAN

--	--	--	--	--	--	--	--	--	--



**SEKOLAH BERASRAMA PENUH  
BAHAGIAN PENGURUSAN  
SEKOLAH BERASRAMA PENUH / KLUSTER  
KEMENTERIAN PELAJARAN MALAYSIA**

**PERCUBAAN PENILAIAN MENENGAH RENDAH 2008**

**55/2**

**SCIENCE**

**Kertas 2**

**Ogos**

1 ½ jam

Satu jam tiga puluh minit

**JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU**

1. *Tulis nama penuh dan tingkatan anda pada ruangan yang disediakan.*
2. *Kertas soalan ini adalah dalam Bahasa Inggeris.*
3. *Calon dikehendaki membaca maklumat di halaman belakang kertas soalan ini.*

<i>Untuk Kegunaan Pemeriksa</i>			
Kod Pemeriksa:			
Bahagian	Soalan	Markah Penuh	Markah Diperoleh
A	1	6	
	2	6	
	3	6	
	4	6	
	5	8	
	6	8	
B	7	8	
	8	12	
JUMLAH		60	

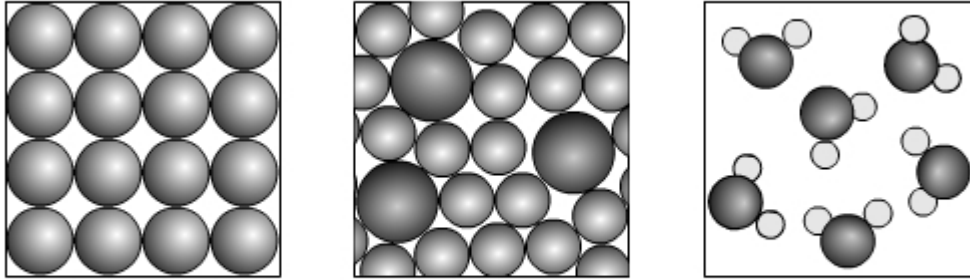
Kertas soalan ini mengandungi 15 halaman bercetak

## Section A

[40 marks]

Answer **all** questions.

- 1 Diagram 1 shows the arrangement of particles in substances L, M and N.



L: \_\_\_\_\_

M: \_\_\_\_\_

N: \_\_\_\_\_

DIAGRAM 1

- (a) (i) On Diagram 1, label the substances L, M and N using the following words.

<b>Mixture</b>	<b>Compound</b>	<b>Element</b>
----------------	-----------------	----------------

[ 3 marks ]

- (ii) Draw lines to match each substance with the correct example.

**Substance****Example**

L

Gold

M

Water

N

Brass

[3 marks]

2 Diagram 2 shows the apparatus set-up to study the use of gas during respiration.

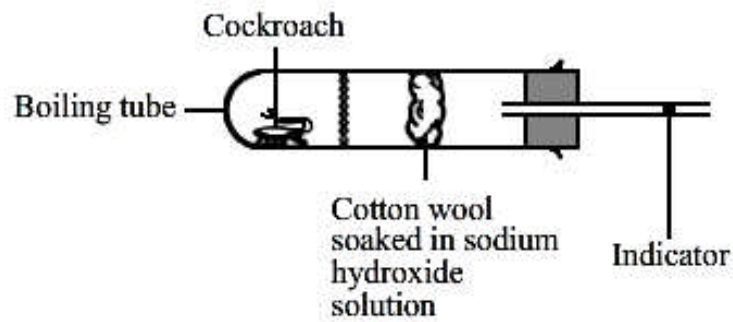


DIAGRAM 2

(a) (i) What can be observed happening to the indicator at the end of this experiment?

.....  
[1 mark]

(ii) Explain your answer in (a)(i).

.....  
.....  
[1 mark]

(b) Why is the cotton wool soaked in sodium hydroxide solution?

.....  
[1 mark]

(c) What happens to the drop of indicator if we replace the cockroach with germinating seed?

.....  
[1 mark]

(d) Suggest how the gas released in this experiment can be tested?

Method : .....

Results : .....

[2 marks]

- 3 Diagram 3 shows the apparatus set-up to detect the presence of class of food.

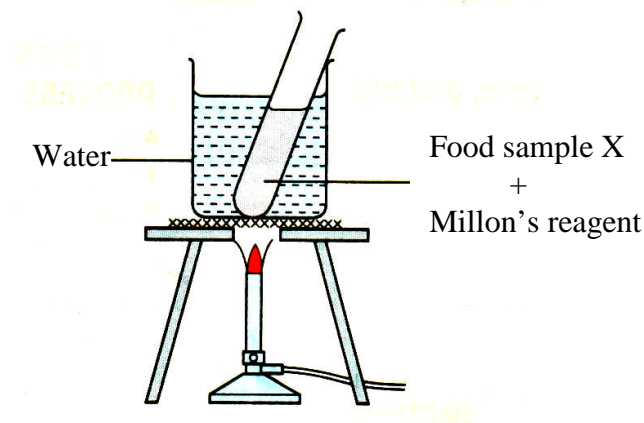


DIAGRAM 3

- (a) (i) State the class of food that is tested in the above experiment.

.....  
[1 mark]

- (ii) Give an example of food for (a)(i).

.....  
[1 mark]

- (b) What can be observed happening to the mixture at the end of the experiment?

.....  
[1 mark]

- (c) State **one** deficiency disease if a person consumes insufficient amount of the class of food in (a)(i).

.....  
[1 mark]

- (d) (i) At which part of the human digestive system will this class of food start to be digested?

.....  
[1 mark]

- (ii) Name the end product of digestion for this class of food.

.....  
[1 mark]

4 Diagram 4 shows the skeletal system of a blue whale.

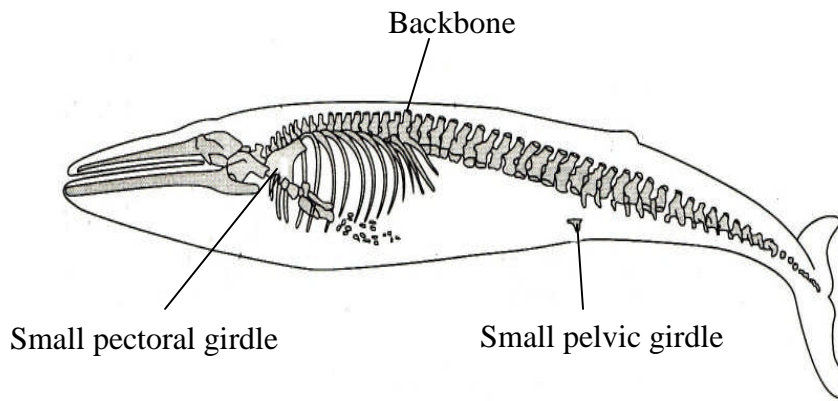


DIAGRAM 4

(a) Name the type of support system for the blue whale.

.....  
[ 1 mark]

(b) State other **two** types of support systems for animals.

- i. ....
  - ii. ....
- [2 marks]

(c) How can a whale support their big body size in the sea?

.....  
[1 mark]

(d) Each year, many whales get beached or stranded in shallow water. When a whale is beached, it is unable to support itself. Explain why?

.....  
.....  
.....  
[2 marks]

5 Diagram 5.1 shows the surface of leaf observed under a microscope during a hot day and a cool humid day.

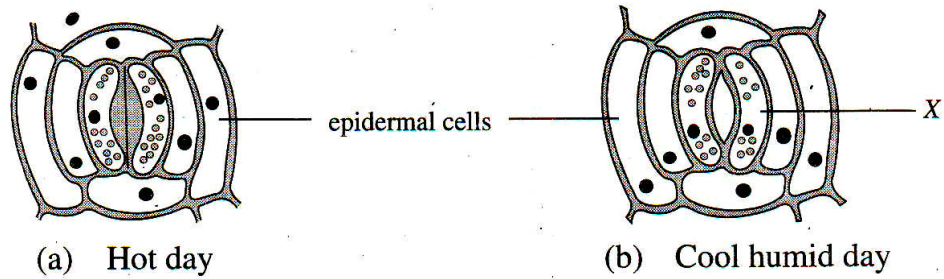


DIAGRAM 5.1

(a) (i) Based on your observations in Diagram 5.1, state the difference in the condition of stomata between both situations.

.....  
 .....

[1 mark]

(ii) Give a reason for your answer in (a)(i) for both situations.

.....  
 .....

[2 marks]

(b) (i) Based on diagram 5.1, what is structure X?

.....

[1 mark]

(ii) State the function of structure X?

.....

[1 mark]

(d) Diagram 5.2 shows a process that occurs in plants during a hot day.

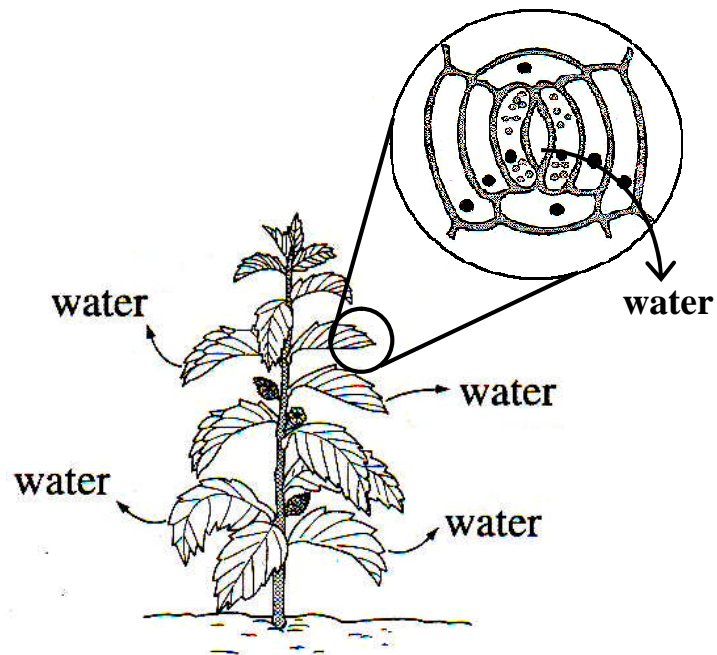


DIAGRAM 5.2

(i) Name the process shown in Diagram 5.2

.....  
[1 mark]

(ii) What is the importance of the process to plants?

.....  
[1 mark]

(iii) State **one** factor that affects the process stated in (d)(i).

.....  
[1 mark]

6 Diagram 4 shows the human growth curve.

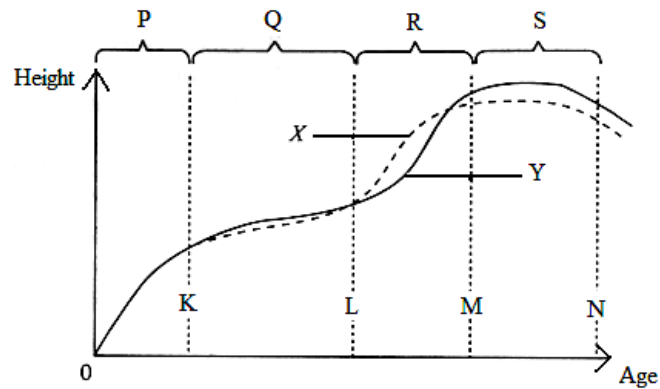


DIAGRAM 4

(a) (i) What is growth?

.....  
.....

[ 1 mark]

(ii) Name the stage of growth P and S.

P : .....

S : .....

[ 2 marks]

(b) Based on Diagram 4,

(i) between X and Y, which graph represents the growth curve of a female?

.....

[ 1 mark]

(ii) Which is the state where females grow more rapidly than males? Explain.

.....  
.....

[2 marks]

(c) Suggest **one** class of food that should be taken in large quantities by teenagers at the adolescence stage. Give a reason for your answer.

Class of food : .....

Reason : .....

[2 marks]



**Section B**

[20 marks]

Answer **all** questions.

7 Diagram 7 shows four different electric circuits.

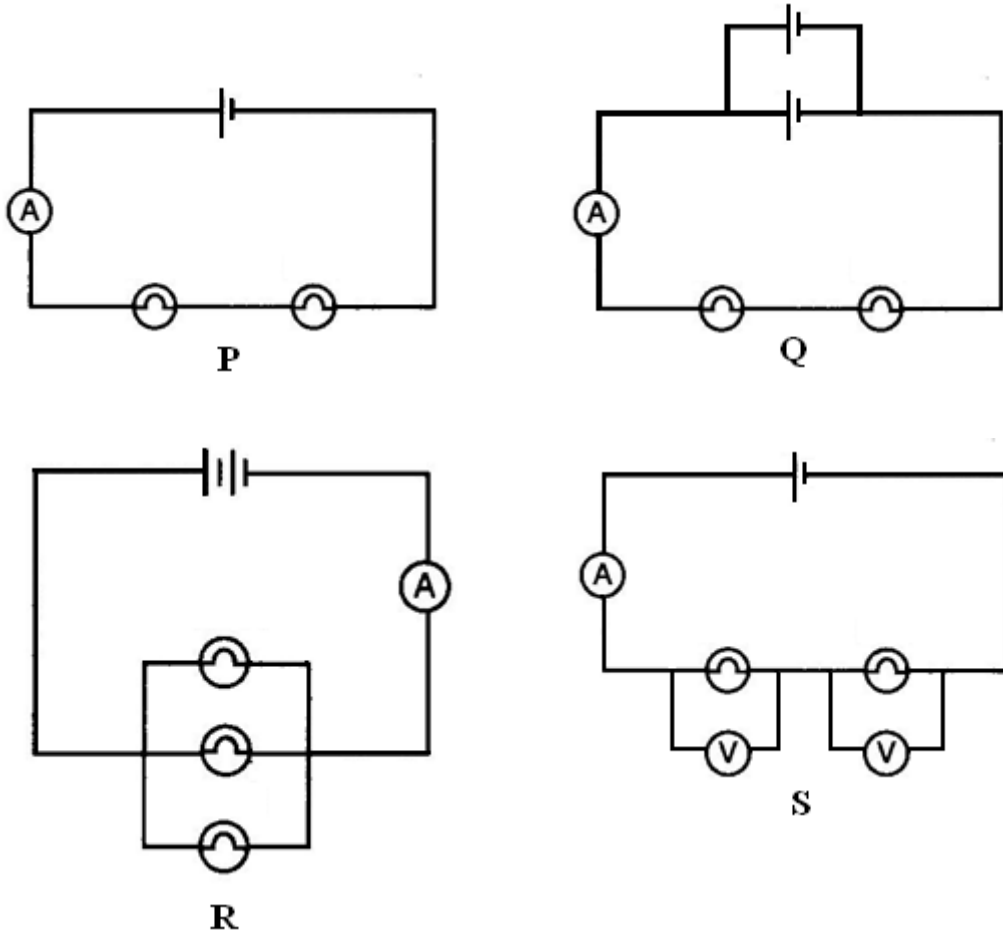


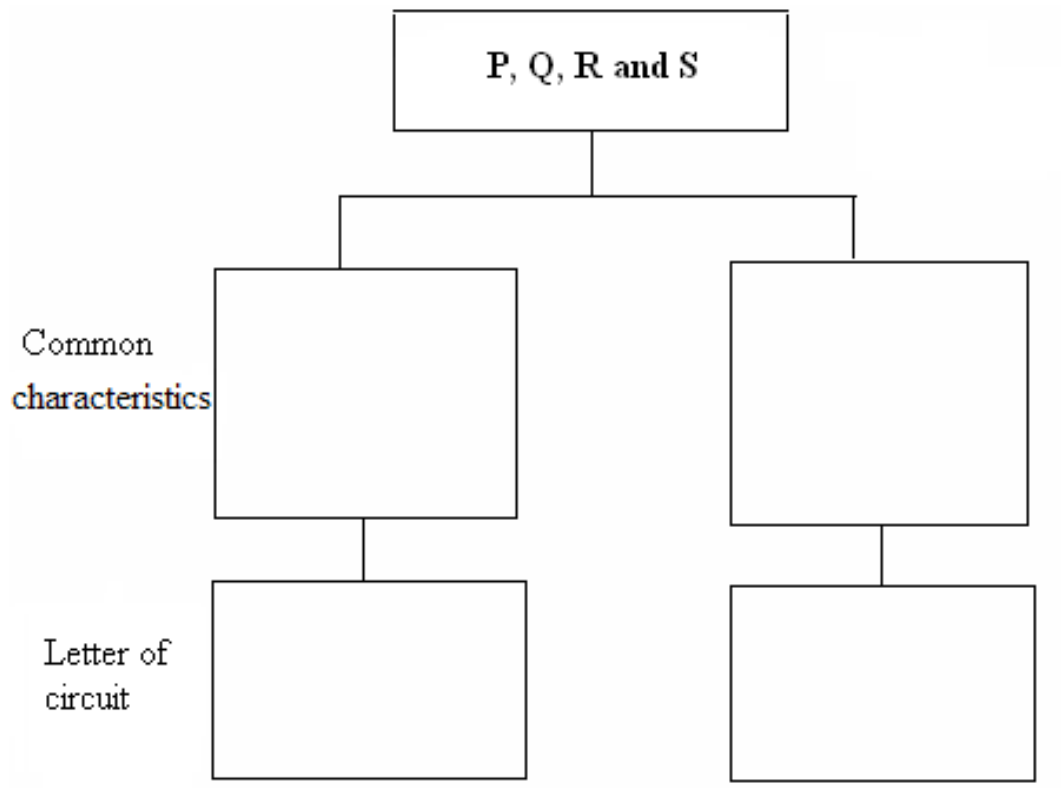
DIAGRAM 7

(a) **Observe** the circuit in Diagram 7.  
State the type of electrical circuit for P, Q, R and S.

- (i) P : .....
- (ii) Q : .....
- (iii) R : .....
- (iv) S : .....

[4 marks]

- (b) Classify the circuit in Diagram 7 into two groups based on their **common characteristics**. Write the **letter P, Q, R and S** of the circuit belonging to each group.



[4 marks]

8. Diagram 8.1 shows the apparatus set-up and the initial reading of the pointer in an experiment.

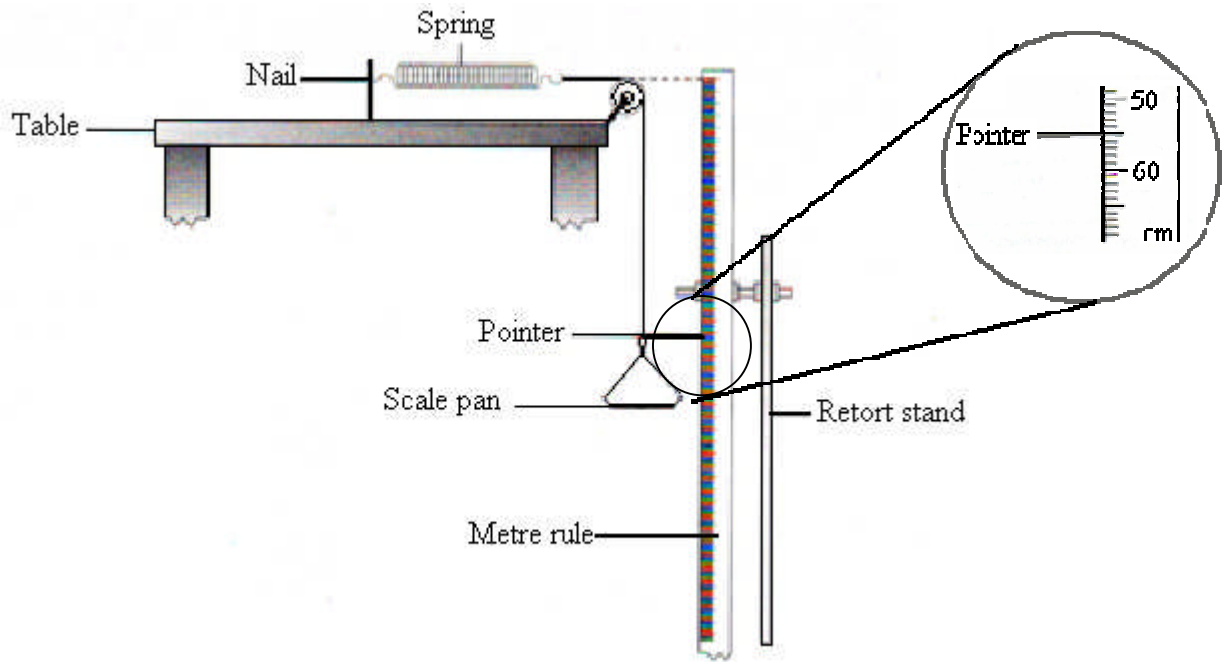


DIAGRAM 8.1

The experiment is carried out in the following way:

- Step 1: The initial position of the pointer is recorded.
- Step 2: A 100g load is put on the scale pan and the new position of the pointer is recorded.
- Step 3: The 100g load is removed and the first two steps are repeated with 200g, 300g, 400g and 500g loads.

- (a) Based on Diagram 8.1, record the initial reading of the pointer.

..... cm

[1 mark]

(b) Table 8.1 shows the results of this experiment.

<b>Mass of load /g</b>	100	200	300	400	500
<b>Pointer position /cm</b>	57	59	61	63	65

Table 8.1

State the variables involved in this experiment.

(i) Manipulated variable

.....

(ii) Responding variable

.....

(iii) Constant variable

.....

[3 marks]

(c) Complete Table 8.2 by calculating the force and the extension produced.  
(1kg = 10N)

<b>Mass of load /g</b>	<b>Force /N</b>	<b>Extension of spring /cm</b>
100	1	2
200		
300		
400		
500		

Table 8.2

[3 marks]

- (d) For this part of the question, use the graph paper provided on page 14. Based on Table 8.2, draw a graph of extension of spring against force.

[2 marks]

- (e) Based on the graph drawn in 8(d),

- (i) predict the extension of spring when a load of 450g is added to the scale pan.

..... cm

[1 mark]

- (ii) state the relationship between the extension of spring and the force exerted on it.

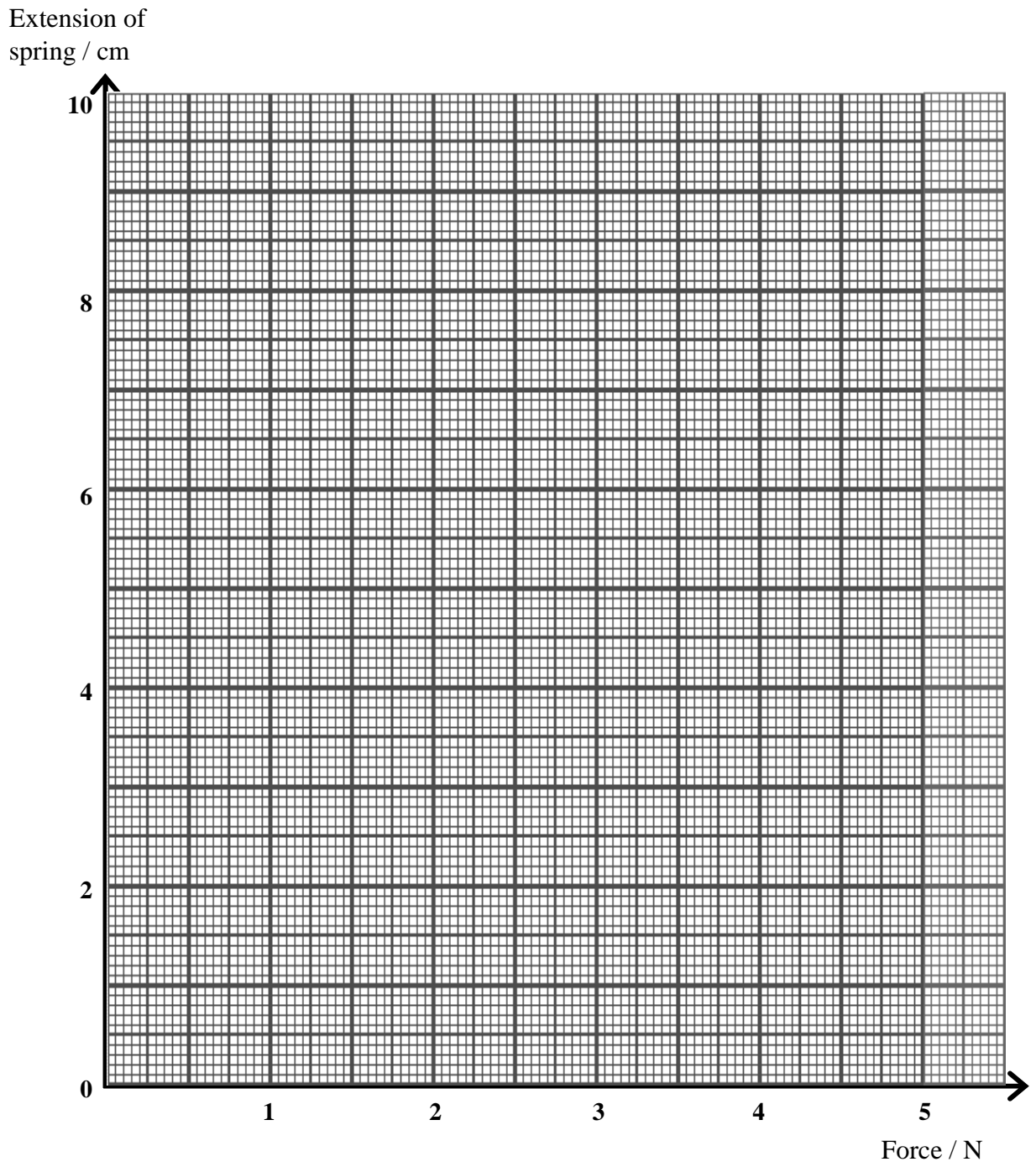
.....  
.....

[1 mark]

- (f) What can you deduce about the meaning of **extension of spring**?

.....  
[1 mark]

Graph for Question 8 (d)



END OF QUESTION PAPER

**INFORMATION FOR CANDIDATES**

1. This question paper consists of two sections: **Section A** and **Section B**.
2. Answer **all** questions in both sections.
3. Write your answers in the spaces provided in the question paper.
4. Show your working, it may help you to get marks.
5. If you wish to change your answer, neatly cross out the answer that you have done. Then write down the new answer.
6. The diagrams in the questions provided are not drawn to scale unless stated.
7. Marks allocated for each question or sub-part of a question are shown in brackets.
8. The time suggested to complete **Section A** is 60 minutes and **Section B** is 30 minutes.
9. You may use a non-programmable scientific calculator.
10. Hand in this question paper at the end of the examination.