Rosyth School
Second Continual Assessment 2015

SCIENCE
Primary 5

Name: _____ Total Marks: /50

Class: Pr 5 _____ Register No. _____ Duration: 1h 15min

Date: 27 August 2015 Parent's Signature:

Instructions to Pupils:
1. Do not open the booklet until you are told to do so.
2. Follow all instructions carefully.
3. This paper consists of 2 sections, Part I and Part II.
4. For questions 1 to 15, shade your answers in the OAS provided.
5. For questions 16 to 23, write your answers in the spaces provided in Part II.

	Maximum	Marks Obtained
Part I	30 marks	
Part II	20 marks	
Total	50 marks	

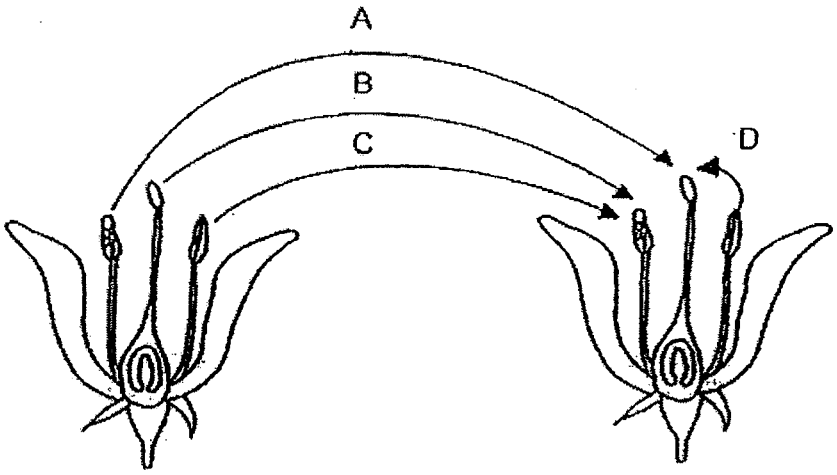
* This booklet consists of 18 pages. (pg. 1 to 18)

Practical Test		
	Maximum	Marks Obtained
Total	15 marks	

Part I (30 marks)

For each question from 1 to 15, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). **Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.**

1. The diagram below shows two flowers from the same plant.



Which of the arrow(s) represent(s) pollination?

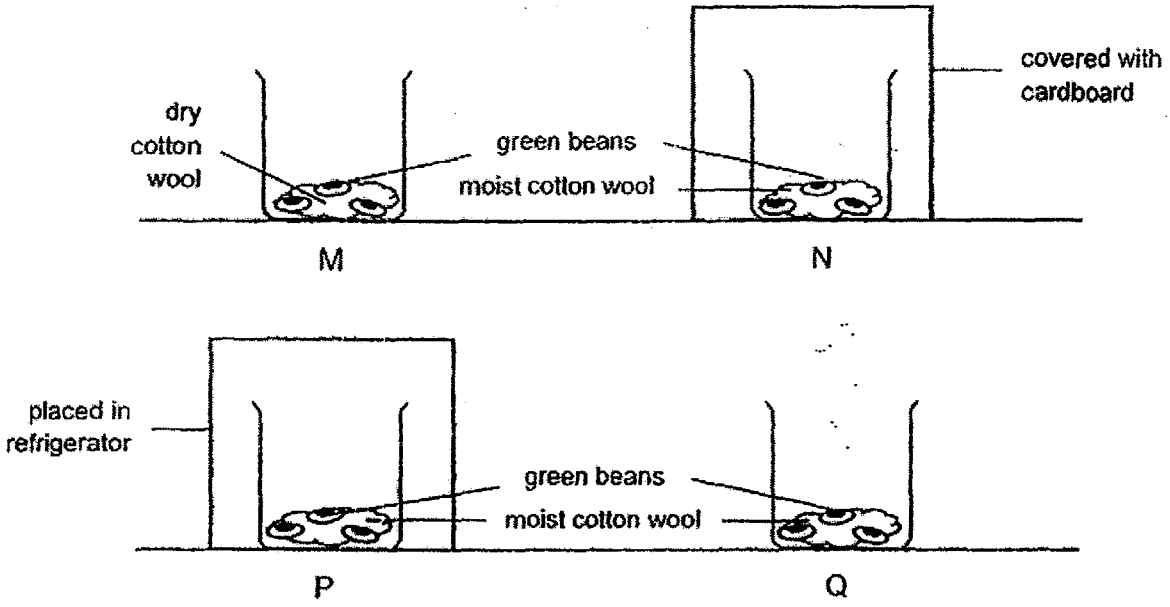
(1) A only
(2) A and D only
(3) B and C only
(4) A, C and D only

2. The following sentences describe how sexual reproduction in plants takes place. Arrange them in order.

A: Male cell fuses with female cell.
B: Pollen grains are transferred to stigma.
C: Anther releases pollen grains.
D: Ovule develops into a seed.
E: Pollen tube grows towards ovule.

(1) C → B → E → A → D
(2) B → C → E → A → D
(3) C → B → D → A → E
(4) B → C → A → E → D

3. Alex set up four beakers M, N, P and Q as shown below. He placed three green beans in each of the beakers. Beakers M, N and Q were kept at room temperature while beaker P was kept in the refrigerator.



He observed that the green beans in Beakers N and Q germinated into young seedlings while those in Beakers M and P did not.

Which of the following conclusions can Alex draw based on his observation?

A: Warmth is needed for the seeds to germinate.
B: Light is needed for the seeds to germinate.
C: Water is needed for the seeds to germinate.

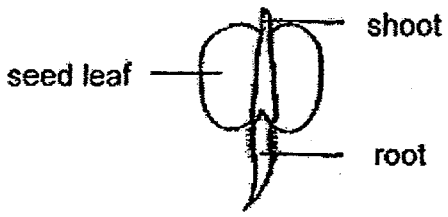
(1) A and B only
(2) A and C only
(3) B and C only
(4) A, B and C

4. Which of the following statement(s) about the male reproductive cell is/are correct?

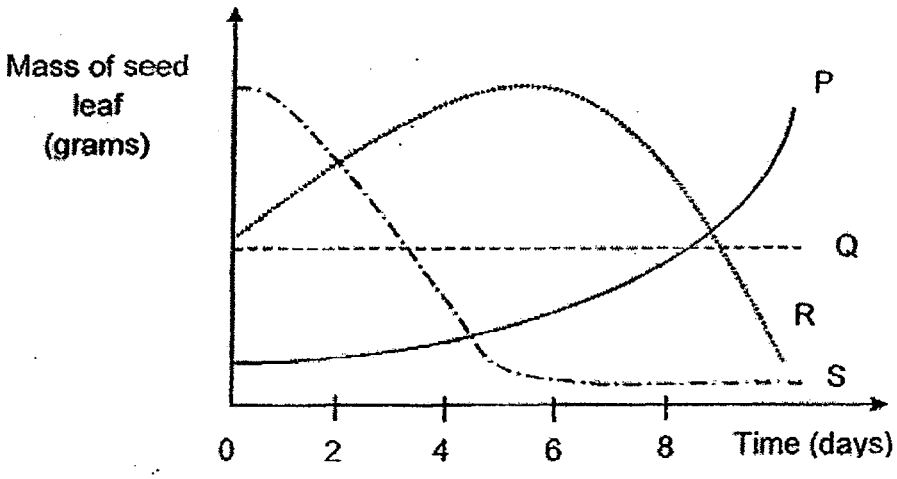
A: It has a nucleus.
B: It is stored in the testes.
C: It is produced in the penis.

(1) A only
(2) A and B only
(3) B and C only
(4) A, B and C

5. The diagram shows a seed that is germinating.



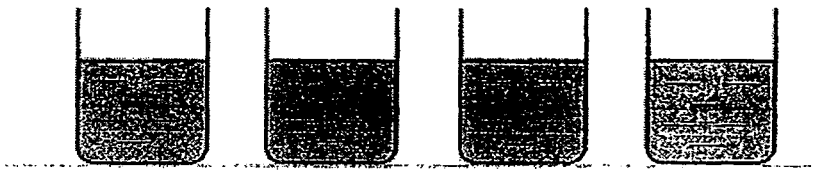
Study the graph below.



Which line shows the change in the mass of the seed leaf over time?

(1) P
(2) Q
(3) R
(4) S

6. Raju placed the same amount of water into four similar beakers (A, B, C and D). The temperature of the water in each beaker is shown below.



In which beaker will the water evaporate the slowest?

(1) A
(2) B
(3) C
(4) D

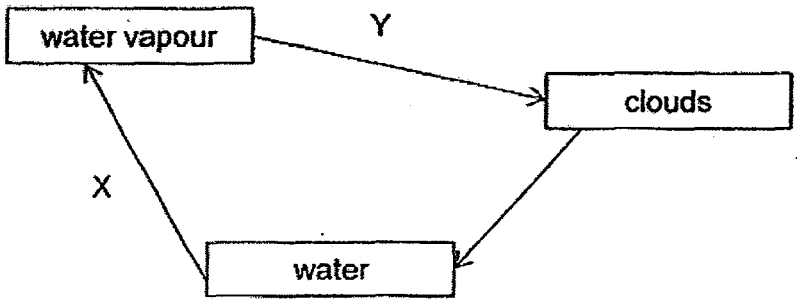
7. Lina was conducting an experiment to find out if the strength of wind would affect the rate of evaporation of water.

Which of the following variable(s) must she keep the same in order for the experiment to be fair?

A: Amount of water at the end
B: Temperature of surroundings
C: Amount of water in the beginning
D: Exposed surface area of the containers

(1) A and C only
(2) A, B and D only
(3) B, C and D only
(4) A, B, C and D

8. Study the diagram of the water cycle as shown below.

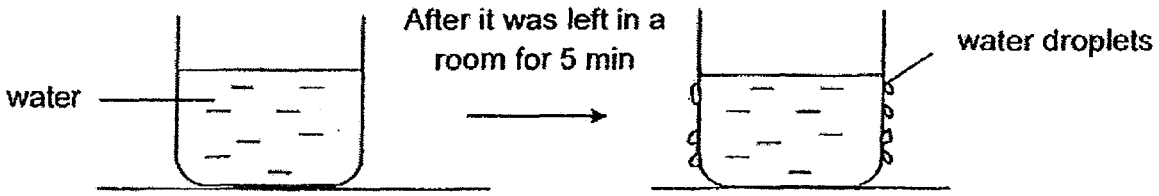


Which of the following statement(s) about the water cycle is/are correct?

A: At X, the water loses heat to the surroundings.
B: At X, the water gains heat from the surroundings.
C: At Y, the water vapour loses heat to the surroundings.
D: At Y, the water vapour gains heat from the surroundings.

(1) A and C only
(2) B and C only
(3) A and D only
(4) B and D only

9. Study the diagram below carefully.



Which of the following statement(s) is/are true based on the diagram above?

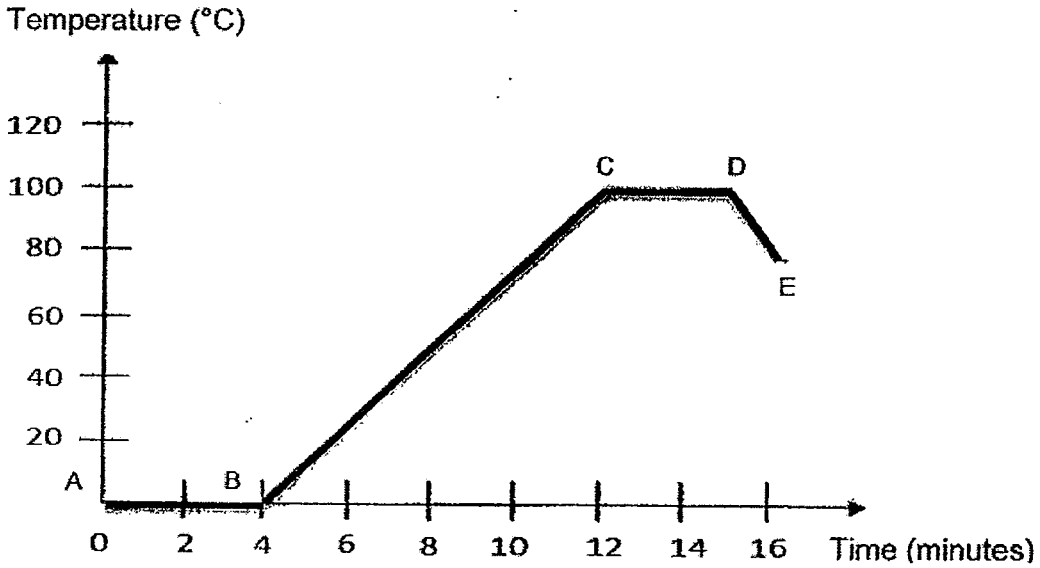
A: Condensation has taken place.
B: Heat is lost by the water vapour in the air to the beaker.
C: The room temperature is higher than the temperature of the water at the start of the experiment.

(1) A only
(2) A and B only
(3) B and C only
(4) A, B and C

10. Every morning, Jane notices water droplets on the outside of the cars even though it did not rain the night before.
Which of the following statements explains what happens? 1

(1) Water vapour on the car evaporated to the air.
(2) Water vapour from the air condensed on the car.
(3) Water droplets on the car condensed from the air.
(4) Water droplets from the warm air evaporated on the car.

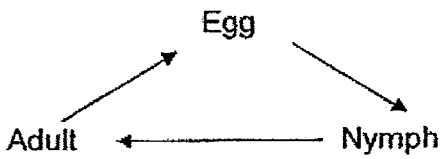
11. Fred heated a beaker of ice and recorded the change in its temperature over a period of time in the graph below.



Which part of the graph shows a change in the state of the water from solid to liquid?

(1) AB
(2) BC
(3) CD
(4) DE

12. Study the life cycle below.

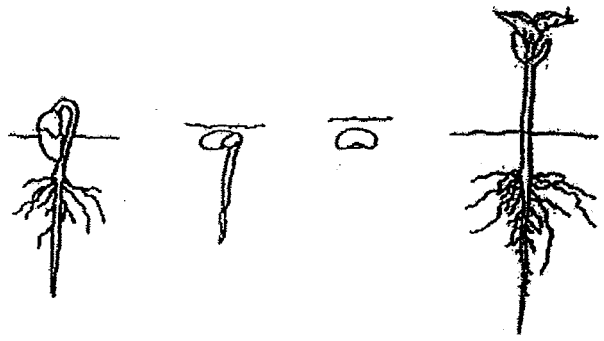


Which of the following animals have a life cycle similar to the above?

A: Mosquito
B: Cockroach
C: Butterfly
D: Grasshopper

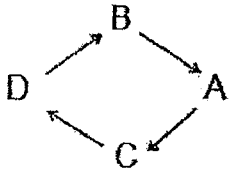
(1) A and B only
(2) B and D only
(3) C and D only
(4) A, B and C only

13. The diagram shows stages in the life cycle of a plant.

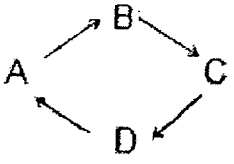


Which of the following shows the correct life cycle of the plant?

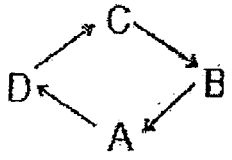
(1)



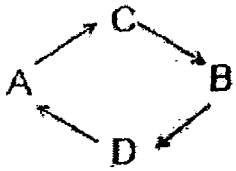
(2)



(3)



(4)

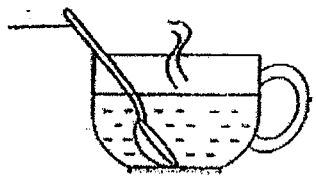


14. Which of the following items has the same properties as a table?

Item	Definite shape	Definite volume	Can be compressed
S	√	√	×
T	×	√	√
U	×	√	×
V	√	×	√

(1) S
(2) T
(3) U
(4) V

15. Ronald places a metal spoon in a cup of hot water.



a cup of hot ~~water~~ water

The spoon becomes hotter after a while.

Which one of the following statement explains why the spoon becomes hotter?

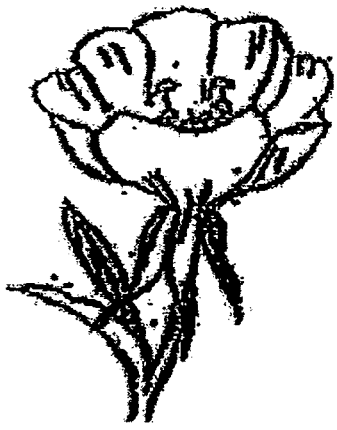
(1) The spoon loses heat to the hot water.
(2) The spoon gains heat from the hot water.
(3) The hot ~~tea~~ water gains heat from the spoon.
(4) The spoon loses heat to the surrounding air.

Part II (20 marks)

For questions 16 and 23, write your answers in the space provided.

16. The diagrams below show two flowers. One is insect-pollinated and the other is wind-pollinated.

Flower X



Flower Y

Which flower X or Y is wind-pollinated? Explain why. (2 m)

_____ _____

_____ _____

_____

17. Bala wanted to find out if the amount of water given to a seedling daily would affect the height of the seedling after ten days. He carried out the experiment a few times and recorded his average results in the table below.

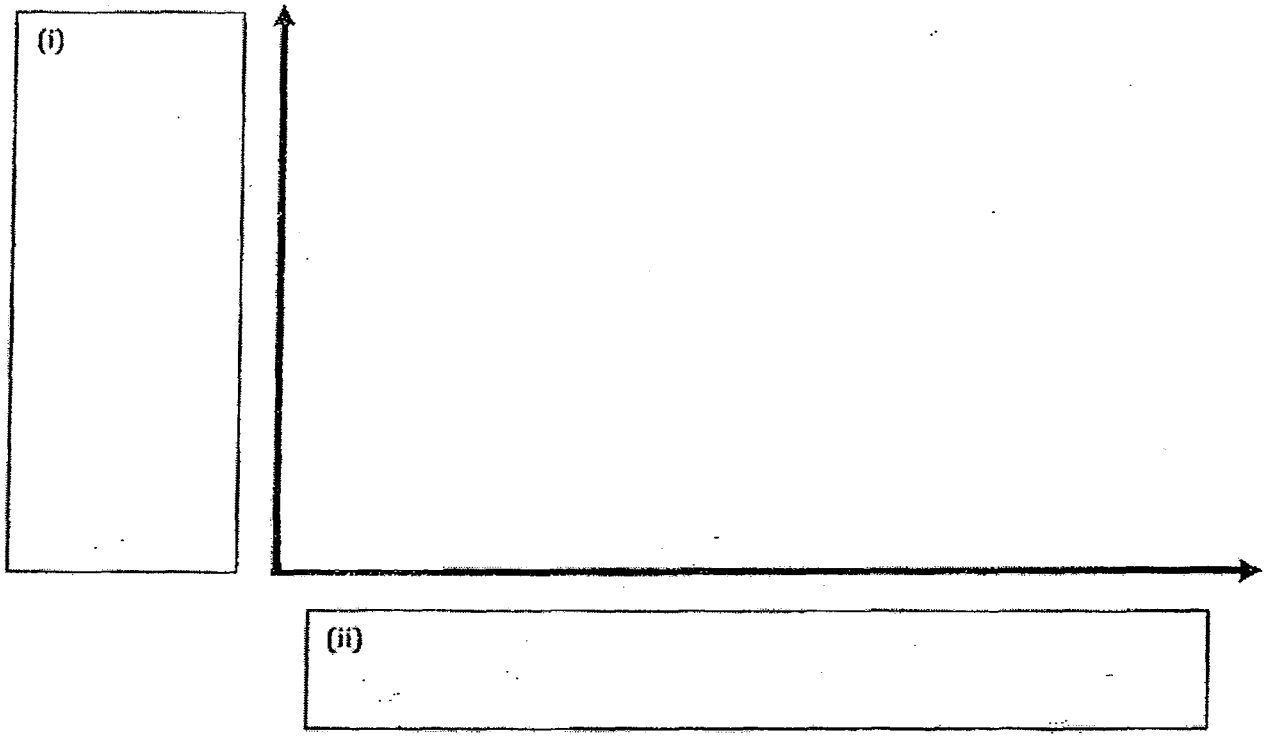
Pot	Amount of water given daily (ml)	Average height of seedling after 10 days (cm)
P	20	3
Q	30	6
R	40	9
S	50	12

a) Why did he repeat his experiment to obtain the average height of the seedlings? (1 m)

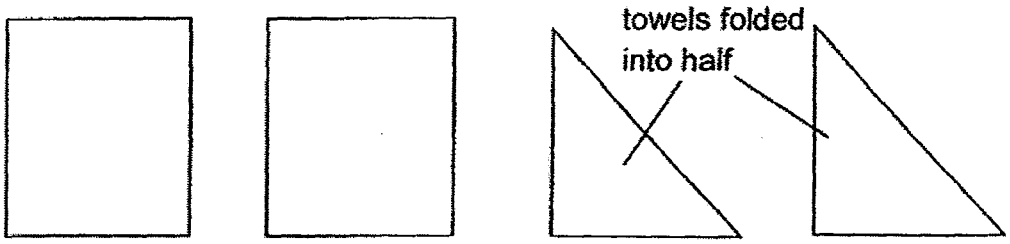
_____

_____

b) Draw a line graph in the space below to show the relationship between the amount of water given to the seedling daily and the height of the seedling after 10 days.
Label boxes (i) and (ii) with suitable headings. (2 m)



18. Four identical bath towels, P, Q, R & S, each containing the same amount of water, were left to dry under different conditions as shown below.



sunny and not windy	sunny and windy	shady and not windy	shady and windy
Condition 1	Condition 2	Condition 3	Condition 4

John recorded the mass of each bath towel at the start of the experiment and after three hours. The results are shown in the table below.

three

Bath towel	Mass of bath towel at the start of the experiment (g)	Mass of bath towel after ~~four~~ hours (g)
P	200	80
Q	200	120
R	200	140
S	200	160

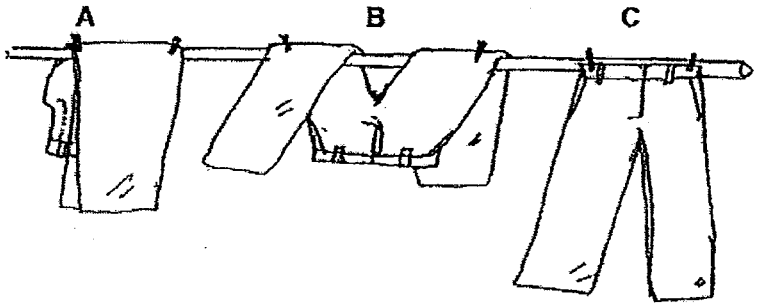
a) Based on the results in the table above, match the ~~face~~ Bath towels (P, Q, R and S) to the correct conditions that they were left out to dry. (2 m)

Conditions	Bath towels
1	
2	
3	
4	

Question 18 is continued on page 13

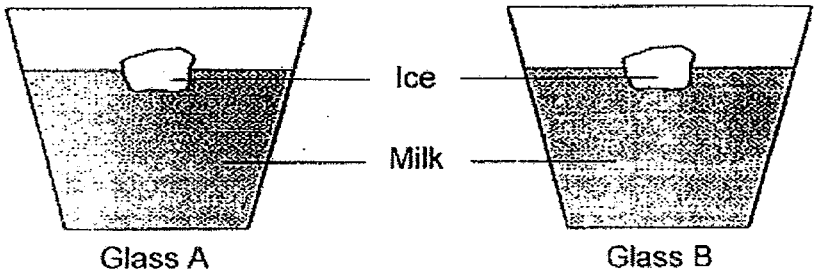
Study the diagram below carefully.

John hung his clothes out to dry using 3 methods, A, B and C.



b) Which method, A, B or C, should John choose to hang his clothes if he wanted his clothes to dry the fastest? Explain your answer. (2 m)

19. Lily placed an ice cube into each of the two glasses, A and B, filled with milk. The temperatures of the milk in both glasses were different.



The time taken for the ice cubes to melt completely in both glasses was recorded by Lily in the table below

Glass	Time taken for ice cubes to melt completely (minutes)
A	10
B	15

a) What is the aim of this experiment? (1 m)

b) In which glass was the temperature lower at the start of the experiment? Give a reason for your answer. (1m)

20. Patric wanted to find out the melting point and boiling of point of two substances, M and N. He recorded the results in the table below.

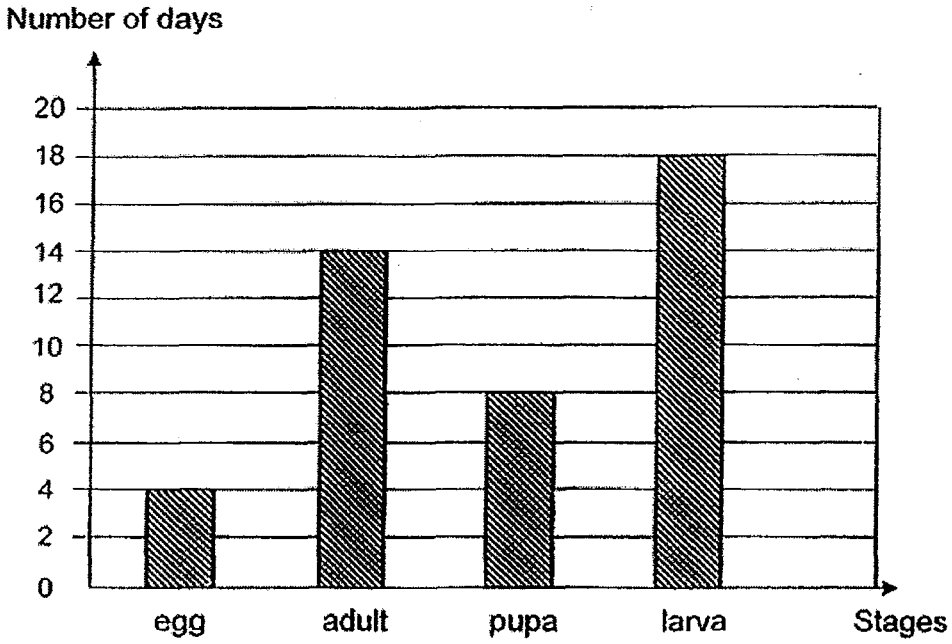
Substance	Melting Point	Boiling Point
M	10°C	100°C
N	20°C	80°C

a) At 15°C, what is the state of each substance? (1 m)

Substance	State
M	
N	

b) Both substances M and N each of mass 300g at 30°C are heated to 85°C in an open beaker. After 15 minutes, which substance, M or N, would have a smaller mass? Give a reason for your answer. (2 m)

21. Rachel studied the life cycle of an insect, H. She recorded the number of days for each stage of its life cycle as shown in the graph below.



a) Based on Rachel's results, how many days does it take for the insect to become an adult after the eggs have hatched? (1 m)

_____

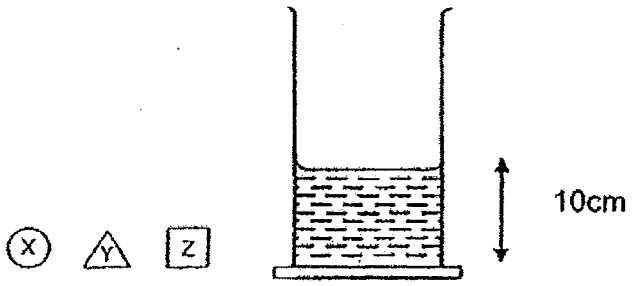
_____

b) Insect H spends certain stages of its life cycle in the water. Give a reason how this will help to increase its chance of survival. (1 m)

_____

_____

22. Bernice placed three objects, X, Y and Z, into a measuring cylinder. The cylinder initially contained water to a height of 10 cm.



She added object X and recorded the height of water. Then she removed object X. She repeated the same steps for objects Y and Z respectively. Each time she added an object into the cylinder, she recorded the height of the water in the table below.

Object added	Height of water (cm)
None	10
X	12
Y	15
Z	18

a) Why did the height of water increase when the object was added into the cylinder? (1 m)

_____

_____

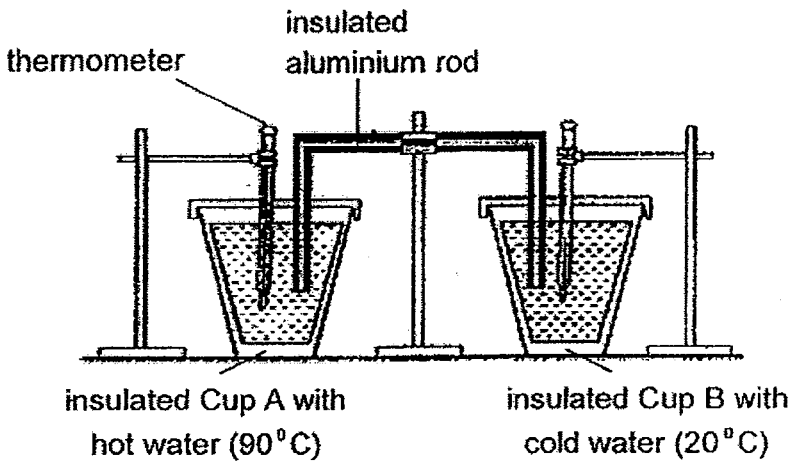
Bernice repeated the same experiment using the container below.

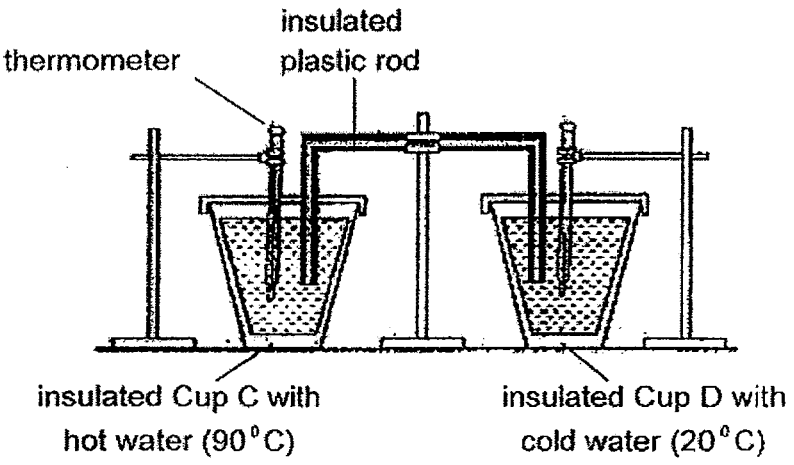
b) Would the volume of the objects be the same? Explain why. (1 m)

_____

_____

23. Amy set up an experiment using four identical insulated cups. The diagram below shows her set-up at the start of the experiment.





Five minutes after the experiment started, Amy recorded the temperature of the water in each cup.

Which one of the following cups (A, B, C or D) will show the highest temperature after 5 minutes? Explain your answer. (2 m)

Answer Key

EXAM PAPER 2015

SCHOOL : ROSYTH

SUBJECT : P5 SCIENCE

TERM : CA2

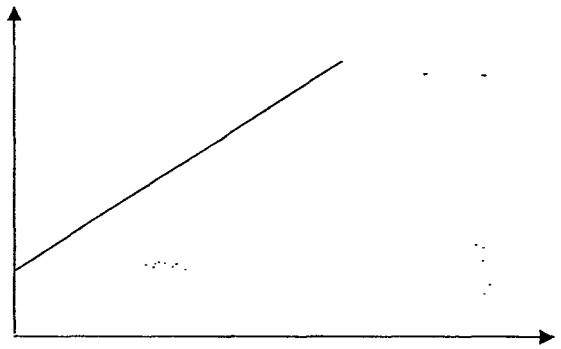
ORDER CALL : MR GAN @ 92998971 92475053 86065443

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	1	2	2	4	3	3	2	4	2
Q11	Q12	Q13	Q14	Q15					
1	2	3	1	2					

16)Flower X, as the anthers of the flower are hanging out, has feathery stigma as it allows wind to how its pollen grains and has dull petals away while Flower Y has brightly-coloured petals, sweet scent to attract insects.

17)a)To ensure a reliable result.

b)i)Height of the Seedling.



18)a)Q, P, S ,R

b)Method C. Compared to the others, method C's surface area exposed is more than the rest, thus, the rate of evaporation and drys faster.

19)a)To find out if the temperature of the milk affects the time taken for the ice cube to melt completely.

b)Glass B, it took a longer time for the ice to melt there was lesser amount of heat in B.

20)a)M: liquid N: solid

b)Substance N will have a smaller mass because at 80℃, Substance N is boiling point, and more of Substance N has changed to gaseous.

21)a)26 days.

b)They will not have to compete for same source of food.

22)a)The object occupies space and had taken the space the water had previously took.

b)Yes, as solids have a definite volume.

23)Cup C, plastic is a poor conductor of heat and allowed lesser heat to be transferred to Cup D.

Answer Key

EXAM PAPER 2015

SCHOOL : NAN HUA

SUBJECT : P5 SCIENCE

TERM : CA2

ORDER CALL : MR GAN @ 92998971 92475053 86065443

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	1	3	4	2	2	2	4	4	2
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
2	3	2	4	1	4	3	2	4	2

21)a)By animals.

b)To increases the chance of its kind to be dispersed.

22)a)i)Pollination ii)Fertilisation

b)To attract insects to pollinate the flower.

23)a)Terence is Tom's grandfather.

b)Terence's wife passed the trait to Tim.

24)a)walking-----80 sleeping----65 reading-----70

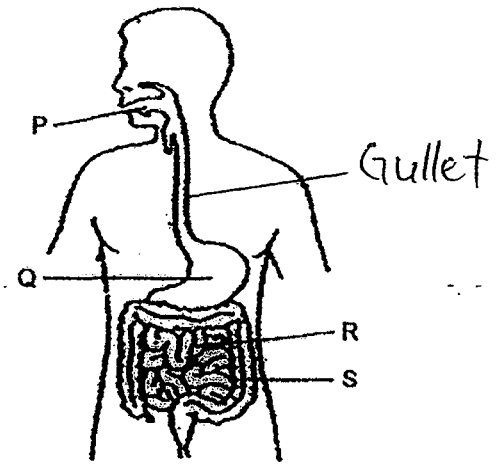
b)Faster. His body needs the energy to walk so his heart pumps more blood rich in digested food and oxygen to all parts of his body.

25)a)1)S2 and S3

2)S2 and S1

b)No bulbs will light-up, S1, S3 and S4 are open so the circuit is open and current cannot flow through the circuit.

26)a)



b)The gullet brings the food from the mouth to the stomach.

27)a)It is to confirm that red bean seeds require water to grow.

b)Place the experimental set-up in the freezer and leave the control set-up in the room. Pour 100ml of water into the experimental set-up.

28)a)A sperm must enter the egg and reach its nucleus.

b)Womb.

c)It is where the fertilized egg will become a baby.

33)b)Set-up will contain less water as the heat energy from the lamp increases the rate of evaporation of the water. Thus, the set-up with the least amount of water will show that heat increases the rate of evaporation.

34)a)Turn object R or magnet Q to see if magnet Q repels object R or if object R repels magnet Q.

b)The magnetic strength of Magnet Q is stronger at its poles than in its center.

29)a)Oxygen, digested food and waste materials.

b)i)Water. ii)Food

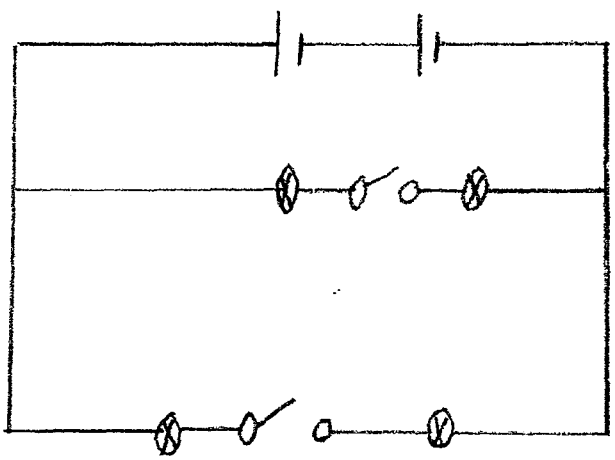
c)Excessive bleeding will result in the loss of blood and there will not be enough blood to carry food to the other parts of the body.

30)a)Cell A has a regular shape nut not cell B.

b)Nucleus. To control the cell's actives and transfer genes when reproducing.

31)a)3 0

b)



32)a)As the number of batteries increased, the brightness of the increased until 4 batteries were added to the circuit. When more than 4 batteries were added, the bulb did not light up.

b)The bulb fused. Too much electric current is passing through as the filament, thus, melting it.

33)a)The mass of the container with the water at fixed time intervals.