

Name: _____

Class : Primary _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 6

Continual Assessment 1 – 2009

SCIENCE

BOOKLET A

4th March 2009

Total Time for Booklets A and B: 1 hour 45 minutes .

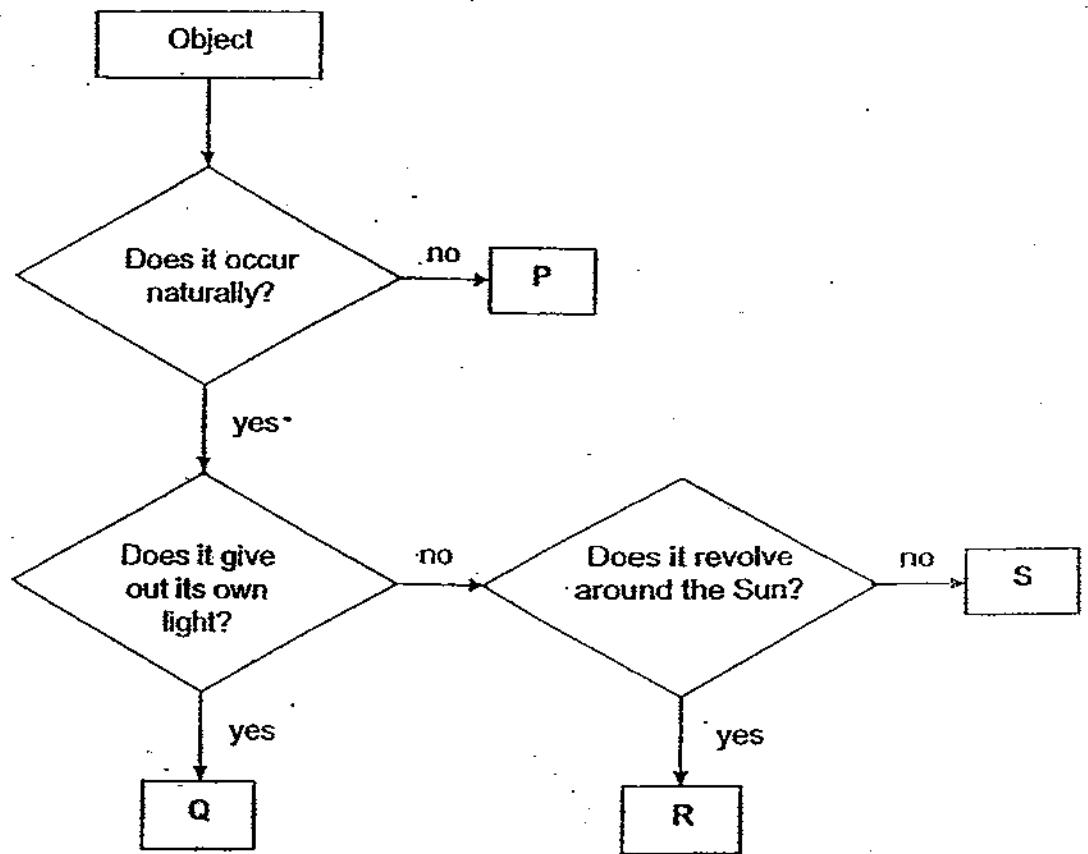
**30 questions
60 marks**

**Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.**

Section A : (30 x 2 MARKS)

For each question from 1 to 30, 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.

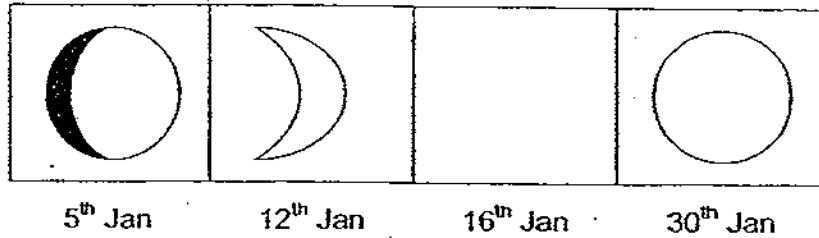
1. The flowchart below is used to differentiate different objects in the Solar System.



Earth is represented by _____.





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

2. The diagrams below show the shapes of the Moon on different dates.

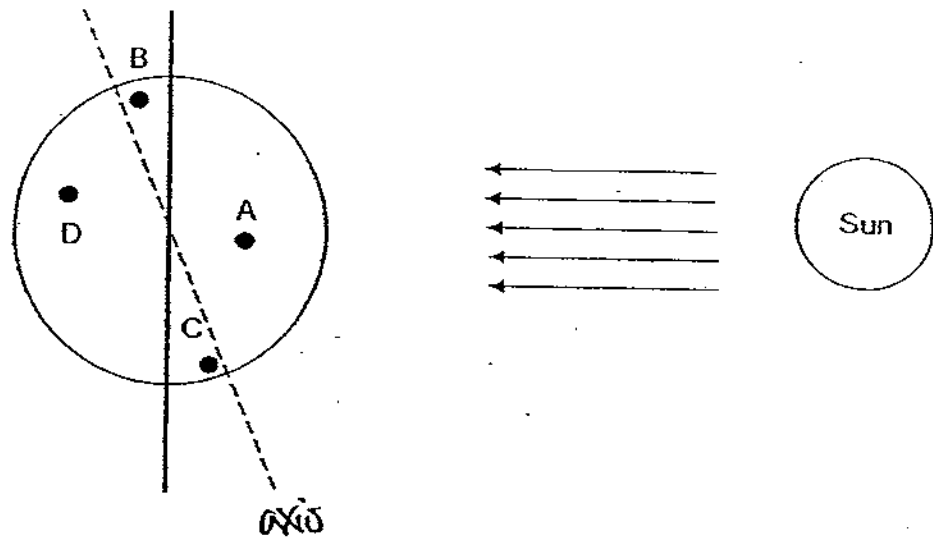


Predict how the Moon would look like on ~~26th~~ Jan.

16th

- (1) 
- (2) 
- (3) 
- (4) 

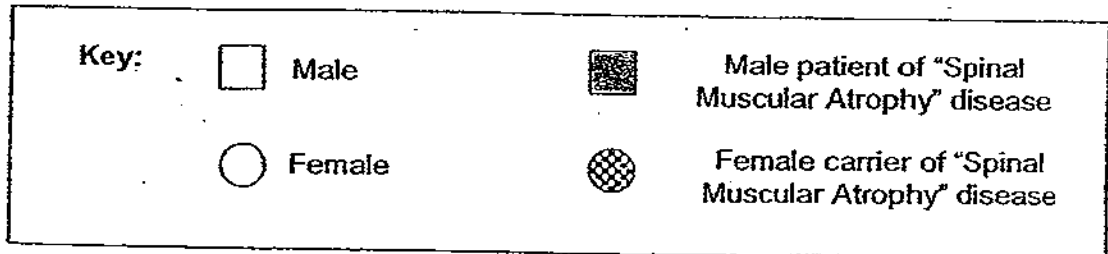
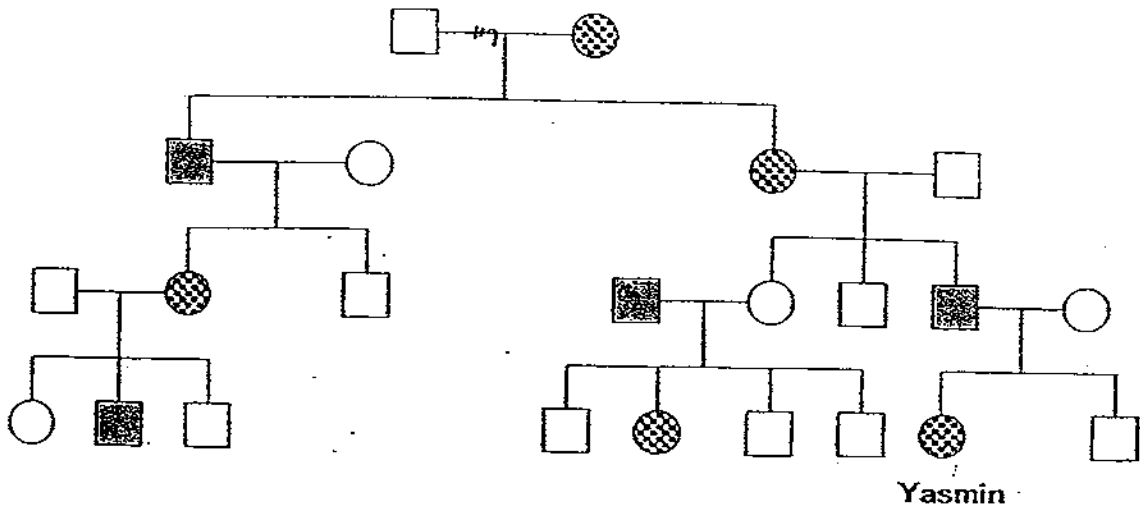
3. Timmy and Jaylin are communicating with each other on MSN. Timmy tells Jaylin that he is currently experiencing nightfall while Jaylin tells Timmy that it is daytime now for her.



The diagram above shows the position of the Earth and the Sun. Which are the likely positions of Timmy and Jaylin respectively.

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

6. The diagram below shows Yasmin's family tree of 4 generations that carry the genetic trait of a disease known as "Spinal Muscular Atrophy".

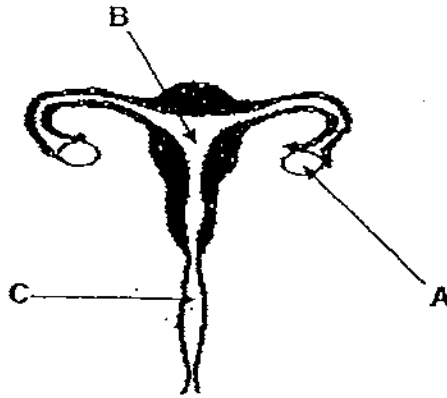


Which of the following statements can you conclude from Yasmin's family tree?

- A: There is a possibility of Yasmin bearing a son with the disease.
- B: The genes of the disease is passed on only to the female members of the family.
- C: The daughter of a male patient with the disease will be a carrier of the disease.
- D: Yasmin's father inherited the genes of the disease from her maternal grandmother.

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

7. The diagram below shows the female reproductive organs.

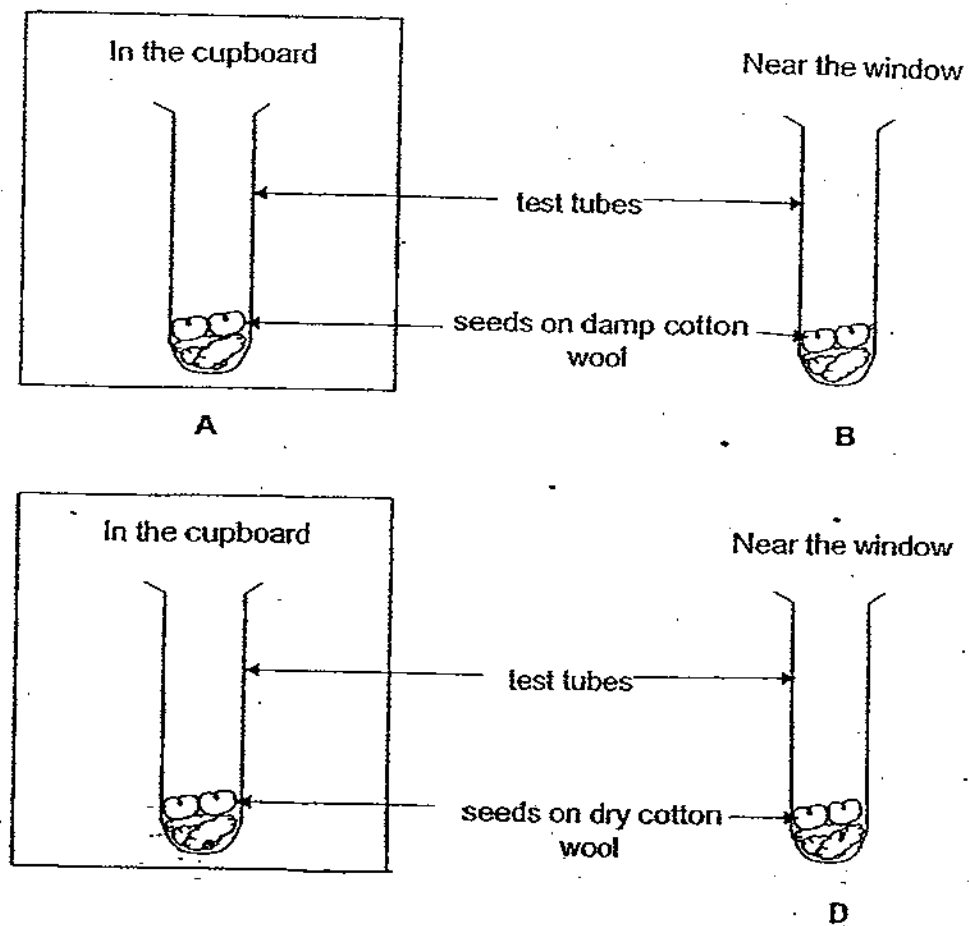


Which one of the following shows the function of parts A, B and C?

	A	B	C
(1)	Stores eggs	Fertilisation takes place	Receives sperm
(2)	Produces eggs	Development of fertilised eggs	Receives sperm
(3)	Stores eggs	Development of fertilised eggs	Fertilisation takes place
(4)	Produces eggs	Stores eggs	Fertilisation takes place

8. Katherine has 4 set-ups, A, B, C and D, as shown below.

She placed set-ups A and C in the cupboard and set-ups B and D near the window. The seeds in set-ups A and B are on damp cotton wool and the seeds in set-ups C and D on dry cotton wool.



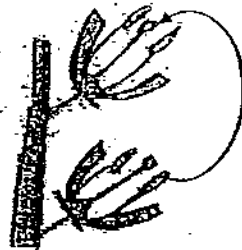
Which of the set-ups shown above should Katherine use to find out if moisture and light are needed for germination?

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

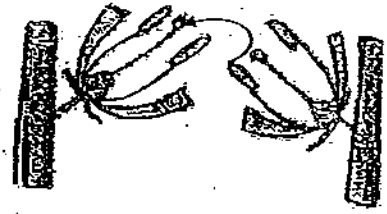
9. The diagrams below show how flowers of a certain plant species go through pollination.



A



B



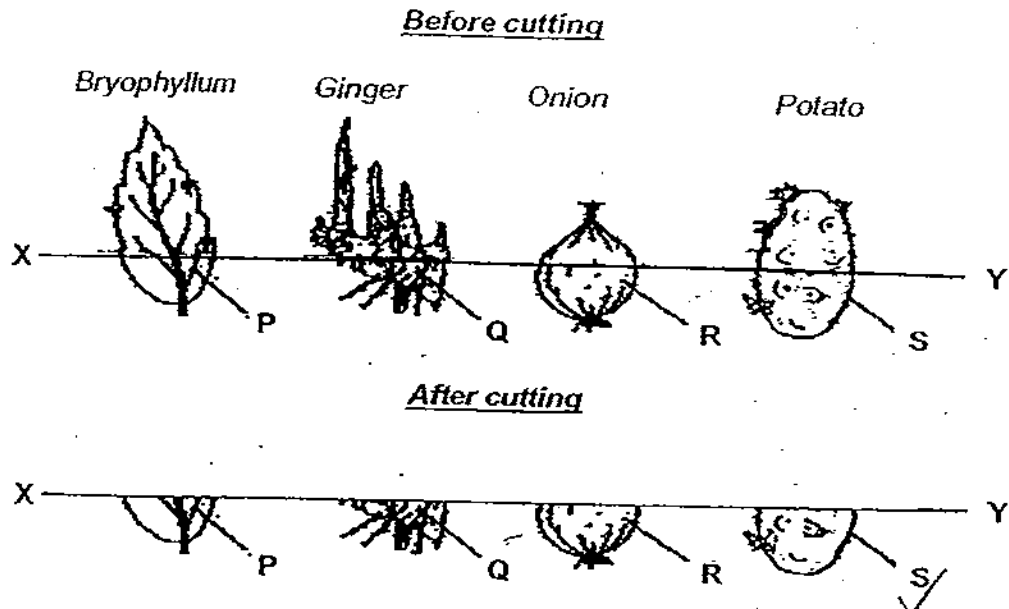
C

The arrows are showing the direction of the transfer of pollen grains

Which one of the following correctly shows the pollination processes that have taken place above.

	Cross pollination	Self pollination
(1)	A only	B and C only
(2)	C only	A and B only
(3)	B and C only	A only
(4)	None	A, B and C

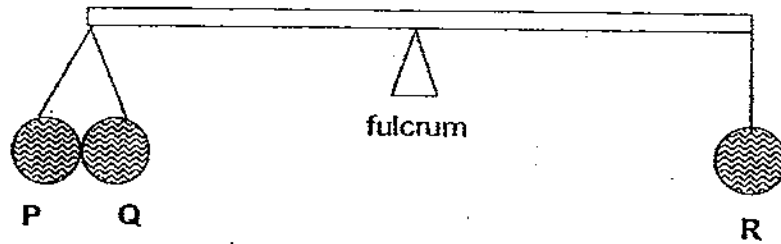
10. The diagrams below show 4 different plant parts. Ken cut each of the plant parts into two. The line XY shows where each plant part was cut.



Ken then placed parts P, Q, R and S into 4 pots of soil. After a few days, he noticed that some parts did not grow into new plants. Which of the above parts did not grow into new plants?

- (1) P and Q only
- (2) R and S only
- (3) P, Q and R only
- (4) P, Q, R and S

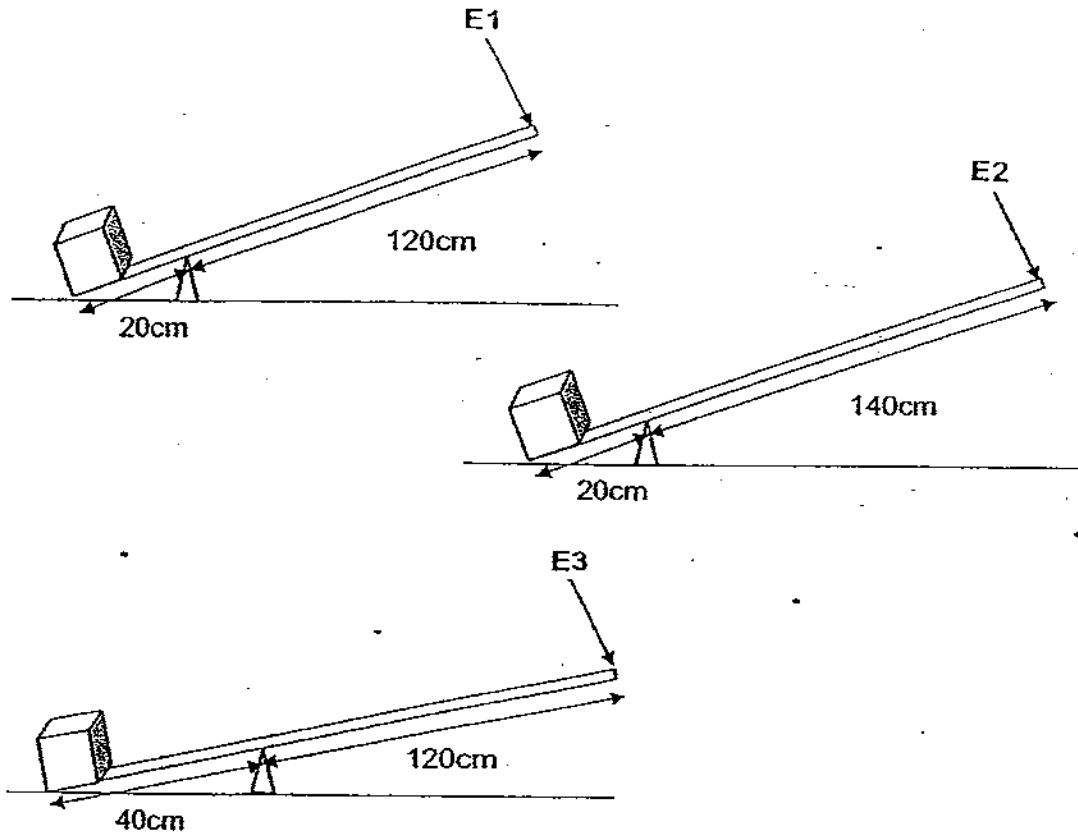
11. 3 steel balls, P, Q and R are balanced on a metal rod as shown below. The fulcrum is in the middle of the rod.



Which of the following statements are correct?

- A: Ball P has a greater mass than Ball Q.
 - B: Ball Q has a smaller mass than Ball R.
 - C: The combined mass of Ball P and Q is the same as mass of Ball R.
 - D: If Ball Q is moved nearer to the fulcrum, the metal rod will stay balanced.
- (1) A and B only
(2) C and D only
(3) B and C only
(4) B, C and D only

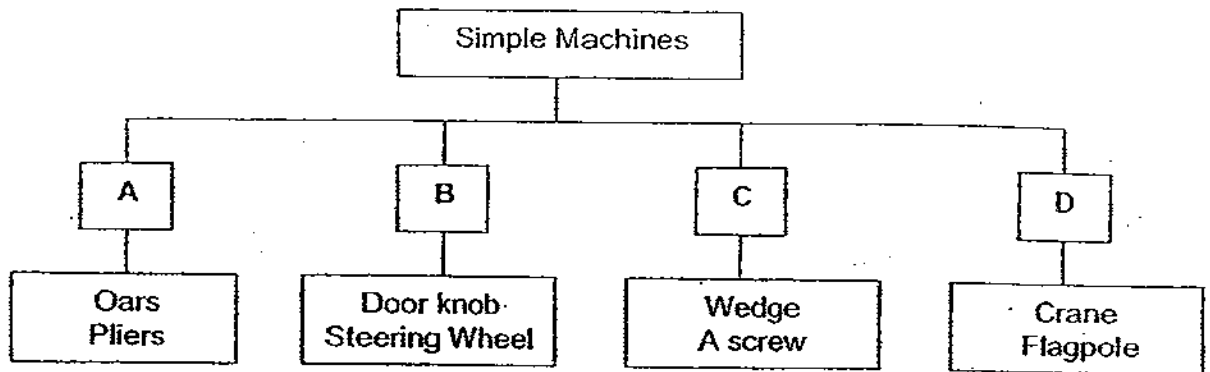
12. The diagrams show 3 levers used to move the same load. The efforts used are E1, E2 and E3 on each lever.



Which one of the following statements about E1, E2 and E3 is correct?

- (1) E1 is greater than E3
- (2) E1 is smaller than E2
- (3) E3 is greater than E2
- (4) E3 is the same as E2

13. The diagram below shows how simple machines have been classified.



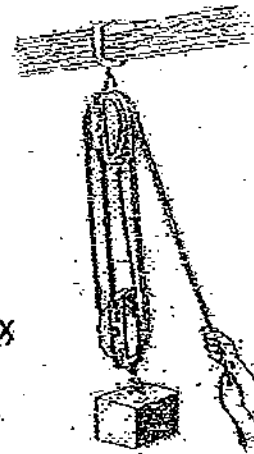
Which one of the following lists shows the appropriate sub-heading for A, B, C and D?

	A	B	C	D
(1)	Lever	Inclined plane	Wheel & axle	Pulley
(2)	Lever	Wheel & axle	Inclined plane	Pulley
(3)	Inclined plane	Pulley	Lever	Gears
(4)	Wheel & axle	Wheel & axle	Lever	Gears

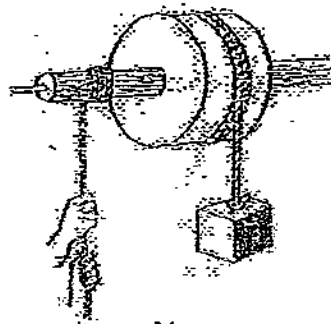
14. The diagram below shows 4 simple machines W, X, Y and Z being used to do work.



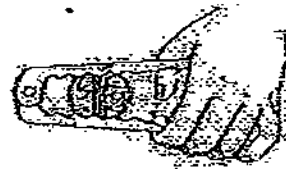
W



X



Y

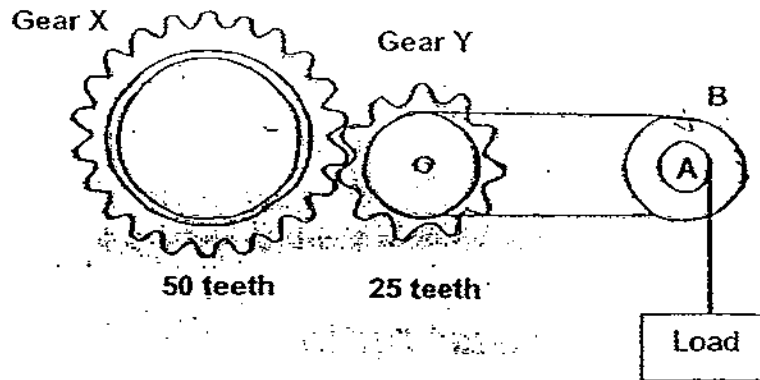


Z

In which of the above simple machines do the load move a longer distance than the effort?

- (1) W and Y only
- (2) Y and Z only
- (3) W and X only
- (4) W, X and Y only

15. The diagram below shows a gear system.



Which of the following statements are true about the system above?

- A: The speed of Gear Y is half of Gear X.
- B: Axle A turns in the same direction as Gear Y.
- C: A and B always turn together in the same direction.
- D: The load is raised when Gear X turns in the anti-clockwise direction.

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

16. Joshua made the following statements about photosynthesis and respiration:

- A: Chlorophyll is needed for photosynthesis to take place in plants.
- B: Respiration takes place only in the night and photosynthesis takes place only during the day.
- C: Carbon dioxide is produced by plants during respiration and taken in by plants during photosynthesis.
- D: The excess food made during photosynthesis is stored as starch only in the seeds, leaves and roots of plants.

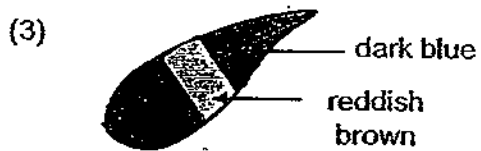
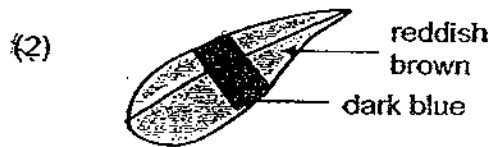
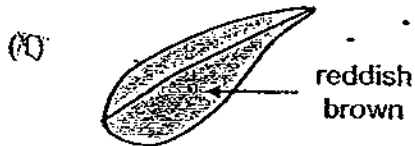
Which of the above statements made by Joshua are correct?

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

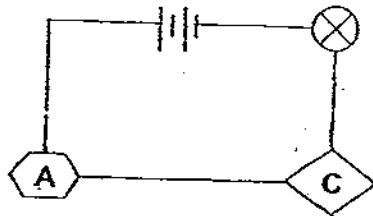
17. Edward covered one of the leaves of his green plant shown below with a piece of black pastel paper. He then kept the plant in a dark place for 2 days. After 2 days, he placed the plant in a bright sunny place for a few hours. At the end of the experiment, Edward conducted an iodine test on the leaf.



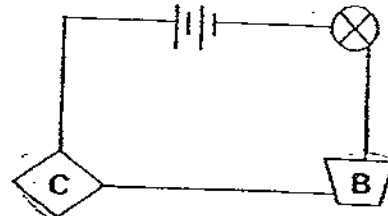
Which one of the diagrams below shows the result of the test?



18. Jose set up the circuits below using a bulb, 2 batteries and 3 objects A, B and C.

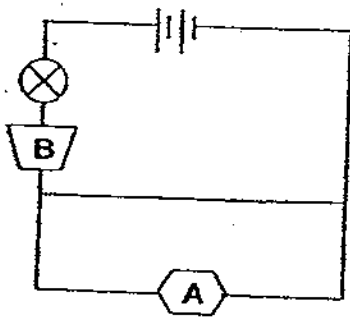


Bulb lights up

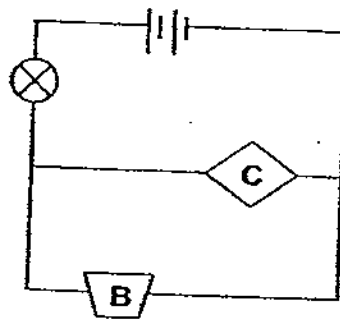


Bulb does not light up

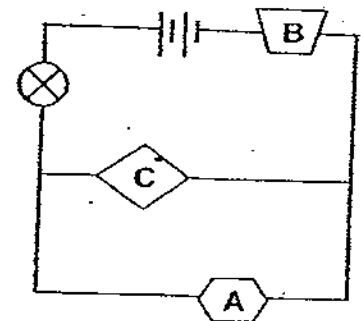
He used the objects, A, B and C, again to form the circuits below.



Circuit E



Circuit F

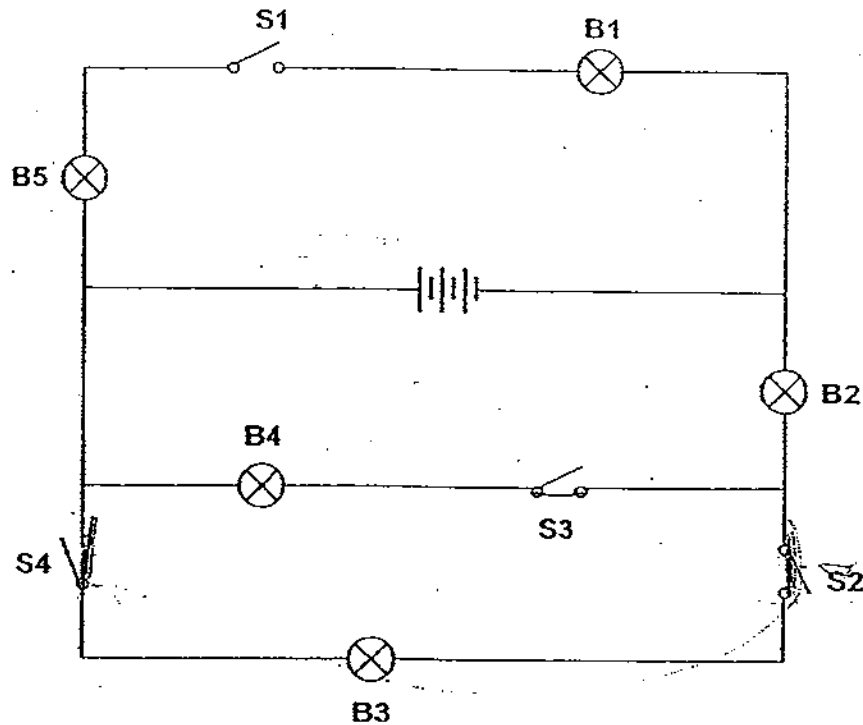


Circuit G

In which of the circuits above would Jose see the bulb lighting up?

- (1) Circuit F only
- (2) Circuit E and G only
- (3) Circuit F and G only
- (4) Circuit E, F and G

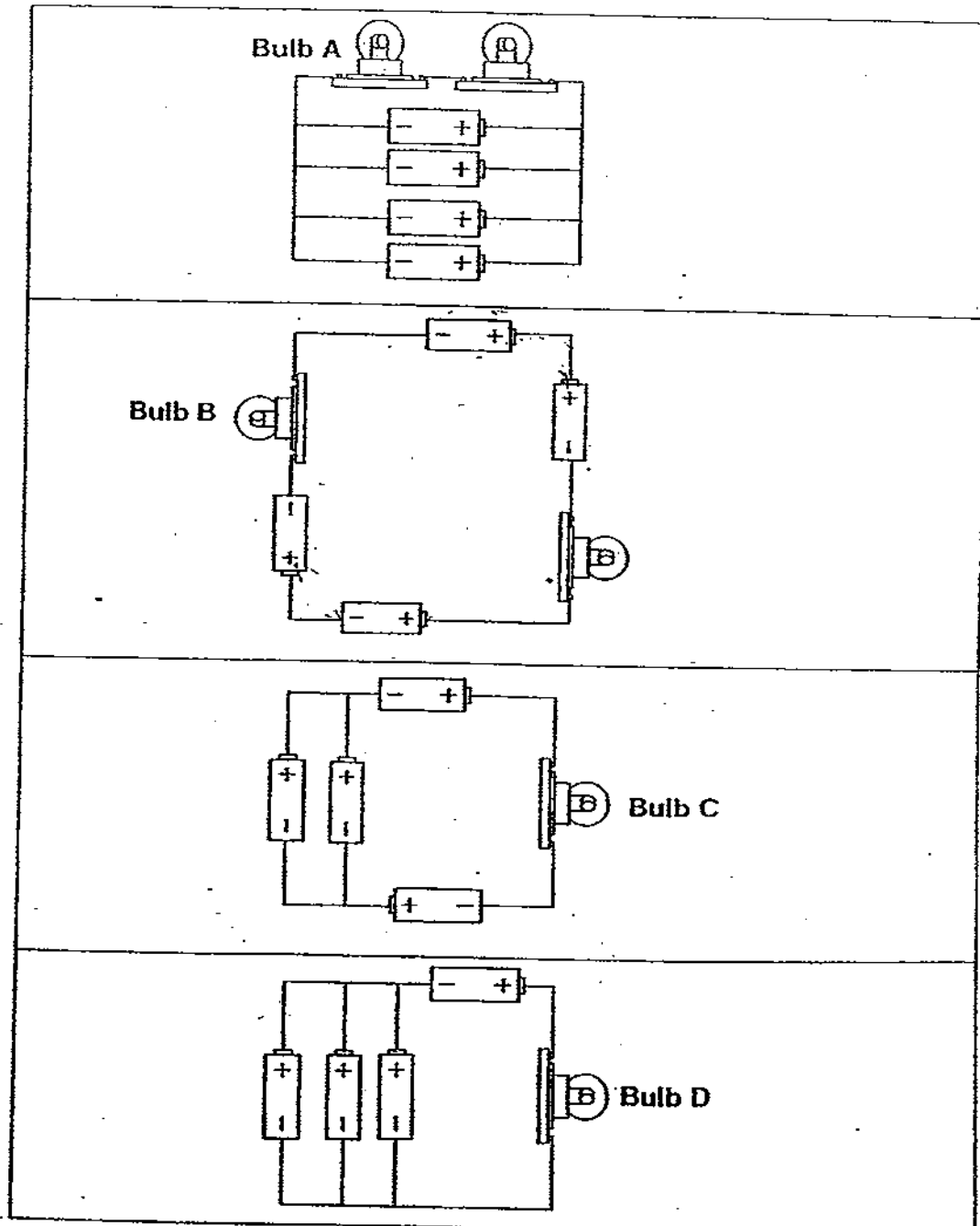
19. The circuit diagram shown below consists of 5 bulbs, 4 switches and 3 batteries.



Which one of the following statements about the circuit shown above is correct?

- (1) When S1, S2 and S3 are open and S4 is closed, only B2, B3 and B4 would light up.
- (2) When S3 and S4 are closed and S1 and S2 are open, only B2, B3 and B4 would light up.
- (3) When S2, S3 and S4 are open and S1 is closed, only B1 and B5 would light up.
- (4) When S2 and S4 are closed and S1 and S3 are open, only B2 and B4 would light up.

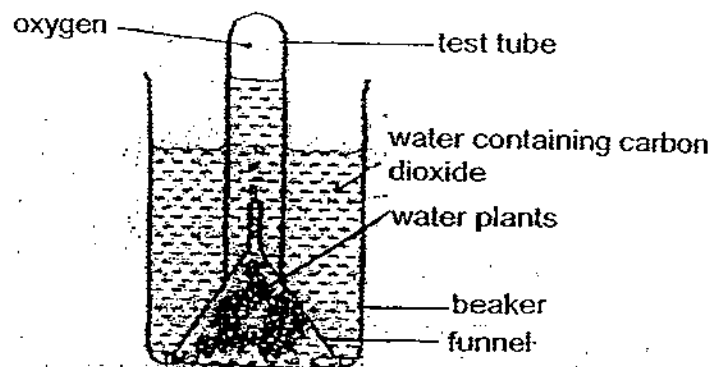
20. Study the four electric circuits as shown below. All the batteries in the circuits have the same voltage and the bulbs are of the same size and voltage.



Arrange Bulbs A, B, C and D in descending order of brightness.

- (1) A, B, D, C
- (2) C, B, D, ~~A~~
- (3) ~~B, C, D, A~~
- (4) C, D, B, ~~A~~

21. Shannon collected 4 water samples A, B, C and D, from different parts of the same river. Using the same amount of each water sample and water plant, she set up the following apparatus and placed the 4 set-ups under the same light source for a day.



At the end of the experiment, Shannon compared the amount of oxygen produced by the water plants and recorded her observations in the table below.

Water sample	Amount of oxygen collected (units)
A	35
B	18
C	15
D	20

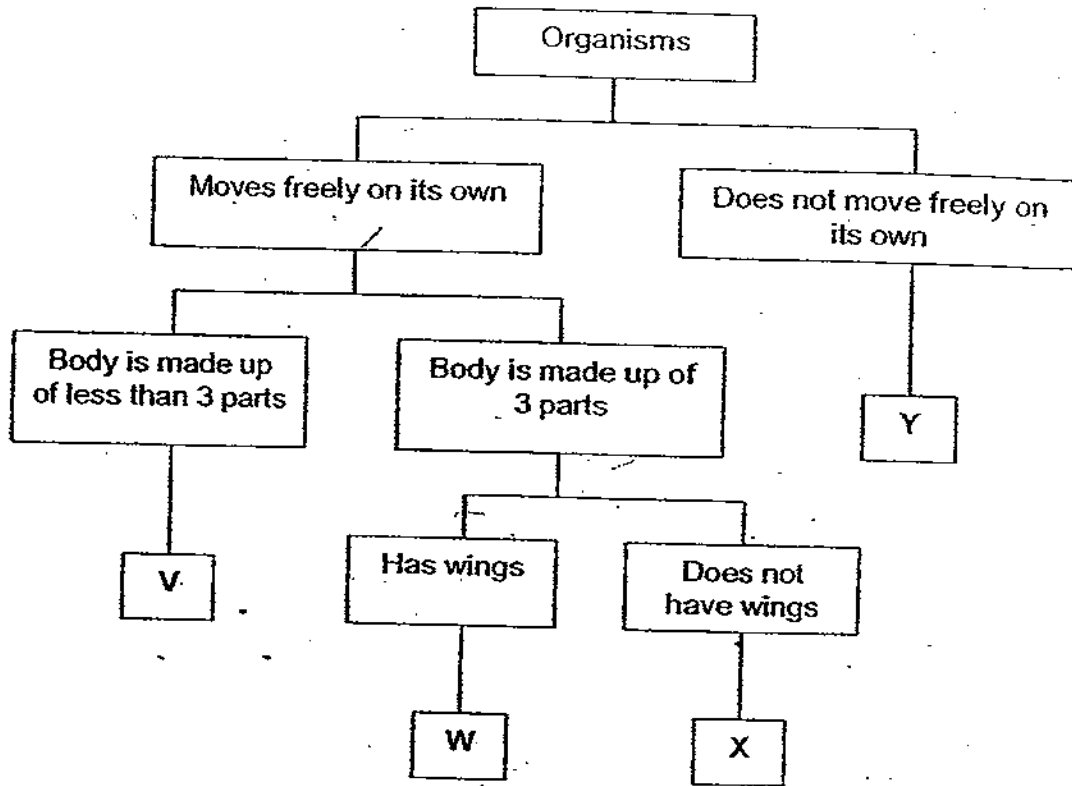
Shannon made the following conclusions based on the information gathered in the table above:

- A: The river is most polluted at the point where sample A is collected.
 B: The water samples used affect the rate of photosynthesis of the water plants.
 C: The water plants in all the water samples, A, B, C and D photosynthesised at different rates.
 D: The rate of photosynthesis of the water plants is dependent on the amount of sunlight received by each plant only.

Based on the above results of Shannon's experiment, which of Shannon's conclusions are correct?

- (1) A and D only
 (2) B and C only
 (3) A, B and C only
 (4) All of the above

22. The chart below shows how some organisms are classified.



Issac caught a grasshopper in the garden.
Which one of the groups, V, W, X or Y, does the grasshopper most likely belong to?

- (1) V
- (2) W
- (3) X
- (4) Y

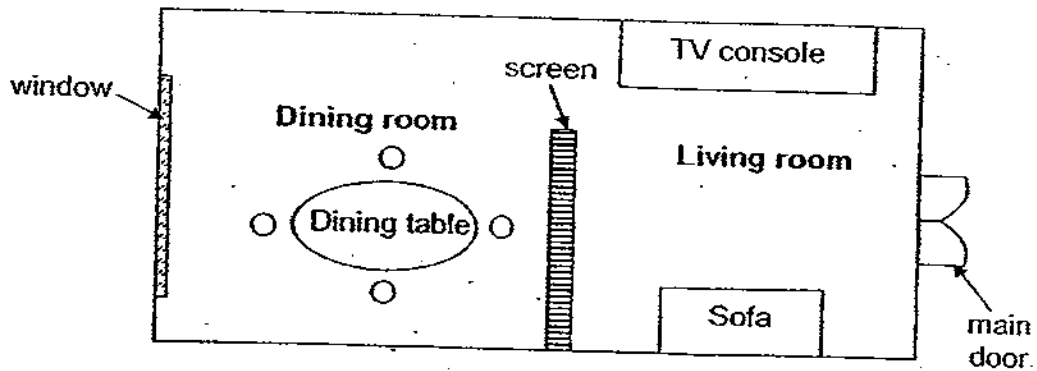
23. Sally fully immersed 4 different fabric of the same size into 4 containers containing the same amount of water. He recorded the amount of water in each container after dipping the fabric into the containers. His results are shown in the table below.

	Container for fabric R	Container for fabric S	Container for fabric T	Container for fabric U
Amount of water in container in the beginning	200 ml	200 ml	200 ml	200 ml
Amount of water in the container at the end	115ml	80ml	145ml	180ml

Based on the results above, which fabric should Sally choose to make an umbrella?

- (1) Fabric R
 (2) Fabric S
 (3) Fabric T
 (4) Fabric U
24. Which of the following possess potential energy?
- A: A piece of fossil fuel
 B: Compressed air in an air rifle
 C: Water in the rooftop tank
 D: *A moire de*
- (1) A and B only
 (2) B and C only
 (3) A and C only
 (4) A, B, C and D

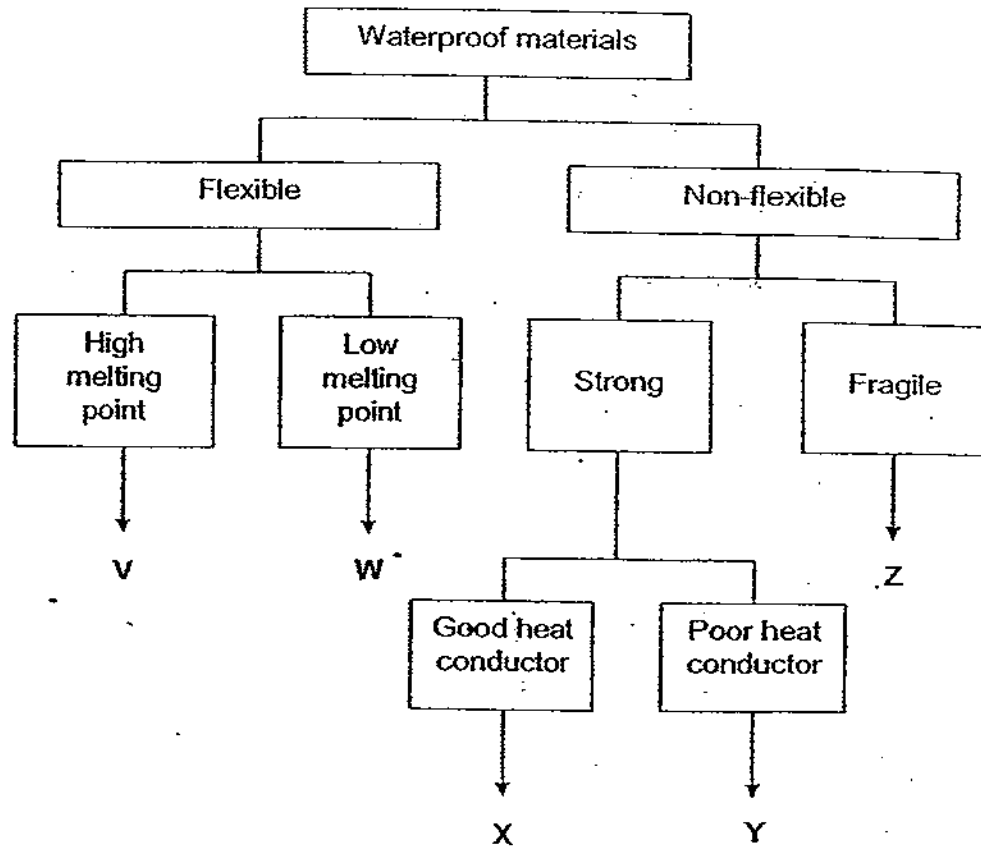
25. Johnny wants to construct a floor-to-ceiling screen in his flat to separate the dining area from the living room. He does not want the screen to be easily scratched by his pet dog. At the same time, he wants to ensure that during dinner time, the living room can be lit by the lights in the dining room to conserve electricity.



Which of the following properties should the screen have in order to meet Johnny's needs?

Properties of material used to make the screen					
	Translucent	Transparent	Opaque	Strong	Hard
(1)			✓	✓	✓
(2)	✓			✓	
(3)		✓			✓
(4)	✓			✓	✓

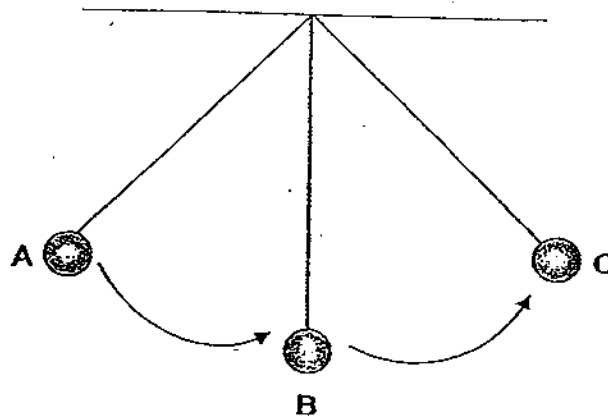
26. The following classification chart shows the properties of some materials, V, W, X, Y and Z.



Mei Fung has to select materials for making a thermal jacket and a frying pan. Based on the classification chart above, which material should she choose to make the thermal jacket and the frying pan respectively?

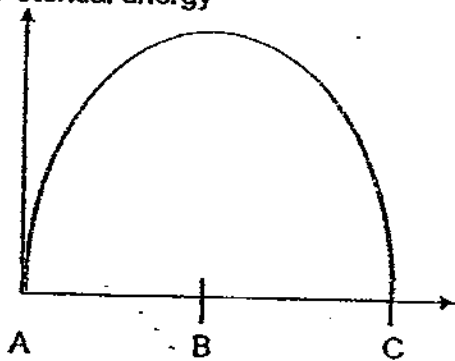
	Frying pan	Thermal jacket
(1)	X	V
(2)	X	W
(3)	V	Y
(4)	Y	Z

27. Sing carried out an experiment using the apparatus as shown below. He lifted the metal ball and let it swing freely for a period of time.

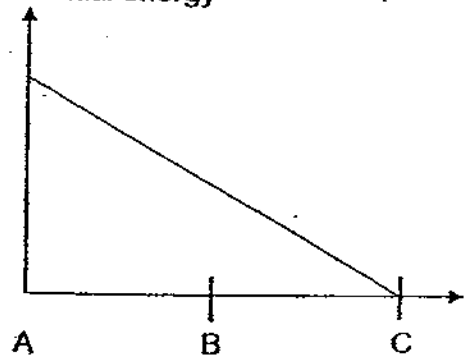


Which one of the following graphs shows the change in potential energy of the metal ball as it was first swung from A to B and then to C?

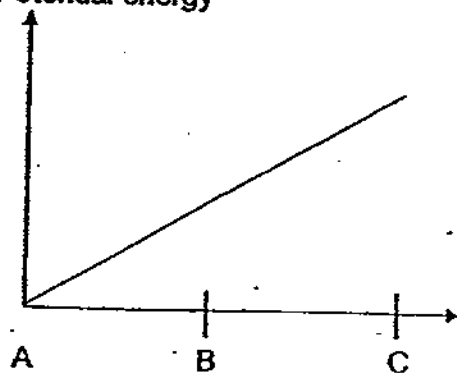
(1) Potential energy



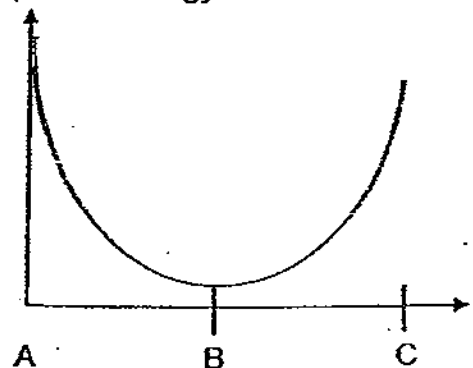
(2) Potential energy



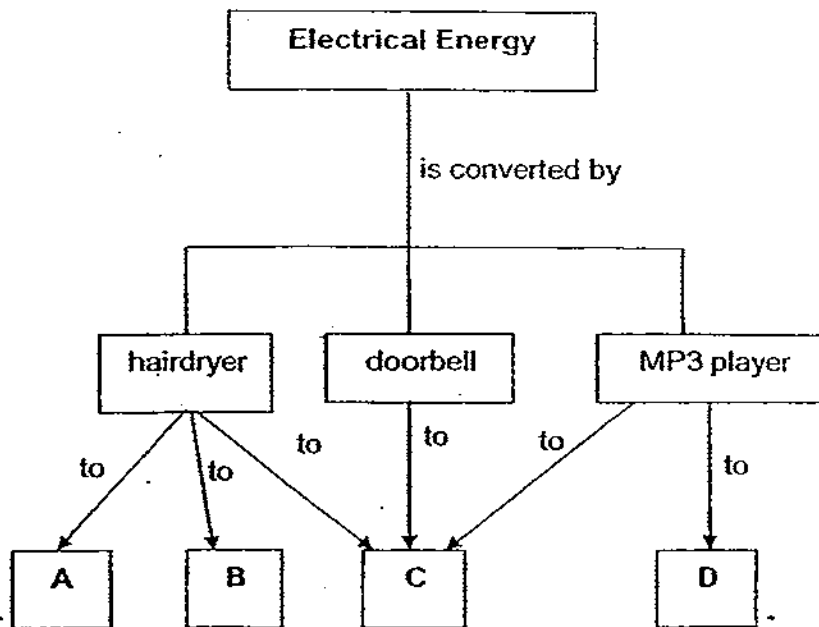
(3) Potential energy



(4) Potential energy



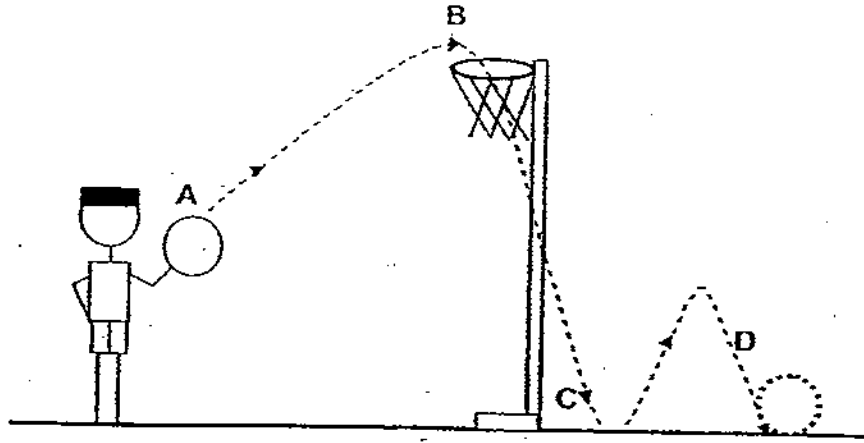
28. The graphic organizer below shows the conversion of electricity to other forms of energy, A, B, C and D, by some electrical appliances.



Identify energy A, B, C and D.

	A	B	C	D
(1)	sound	heat	light	heat
(2)	kinetic	potential	light	heat
(3)	sound	chemical	heat	light
(4)	kinetic	heat	sound	light

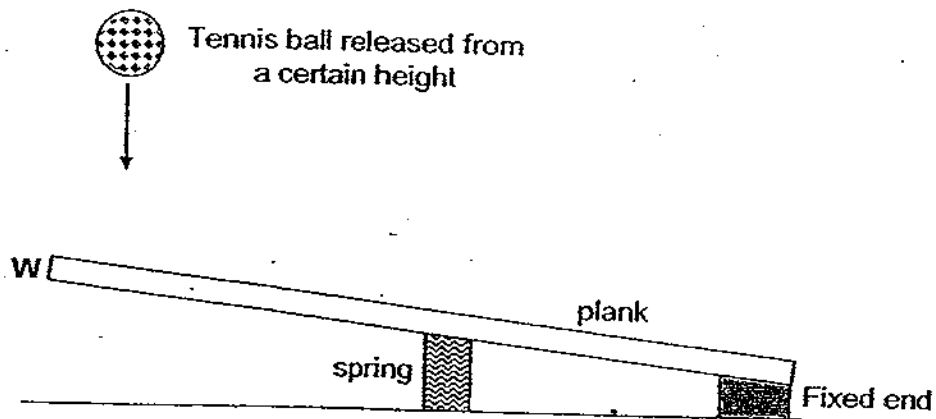
29. Study the diagram below.



David aims and shoots a basketball into the net. The dotted arrows in the diagram above show the path of the basketball. At which point, A, B, C or D, did the basketball possess the greatest amount of kinetic energy?

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

30. Sunny set up the experiment shown below. He released a tennis ball from a certain height above one end of the plank, W. He recorded the height at which the tennis ball was released and the maximum height at which the tennis ball bounced (rebound height). He repeated the experiment several times using the same tennis ball but changed one of the variables each time.



Which of the following shows a possible aim of the experiment and the variables which should be kept constant? A tick (✓) indicates the variable that is kept constant.

	Aim of experiment	Spring position	Length of plank	Distance between tennis ball and end W at the point of release
(1)	How the height of release affects the ball's rebound height		✓	✓
(2)	How the height of release affects the ball's rebound height	✓	✓	
(3)	How the spring's position affects the ball's rebound height	✓	✓	
(4)	How the spring's position affects the ball's rebound height	✓		✓

End of Section A ~ ~

Name : _____ ()

Class : Primary _____

CHIJ ST NICHOLAS GIRLS' SCHOOL



Primary 6
Continual Assessment 1 – 2009
SCIENCE
BOOKLET B
4th March 2009

Total Time for Booklets A and B: 1 hour 45 minutes

16 questions
40 marks

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

Booklet A	60
Booklet B	40
Total	100

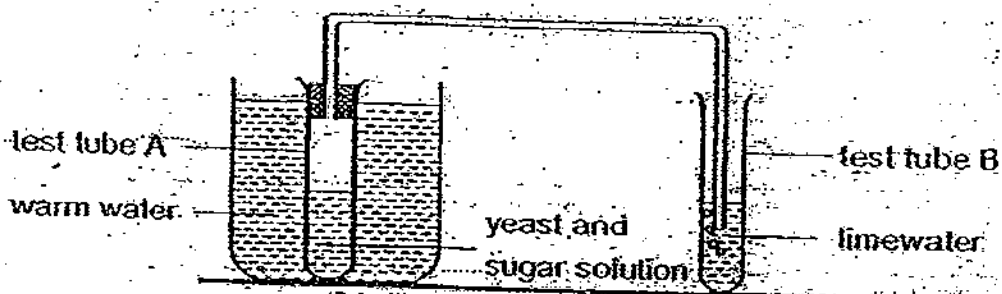
Parent's Signature/Date

Section B : (40 marks)

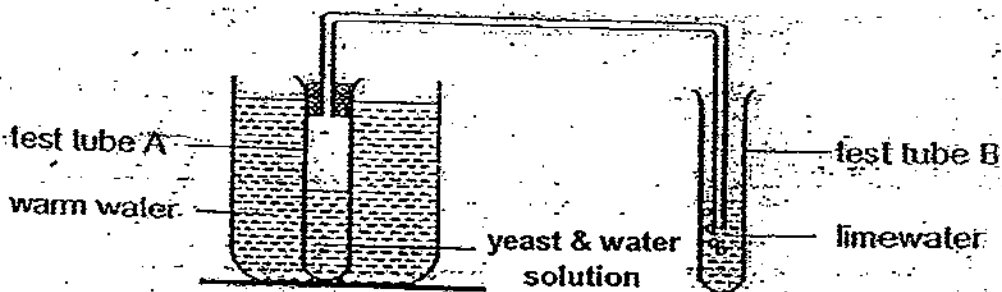
For questions 31 to 46, write your answers in this booklet.

The number of marks available is shown in brackets [] at the end of each question or part question.

31. Pei Hwa carried out an experiment as shown below. In setup X, the test tube A contained some sugar, yeast and water while in setup Y, the test tube A contained yeast and water.

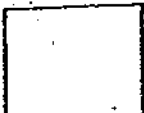


Setup X

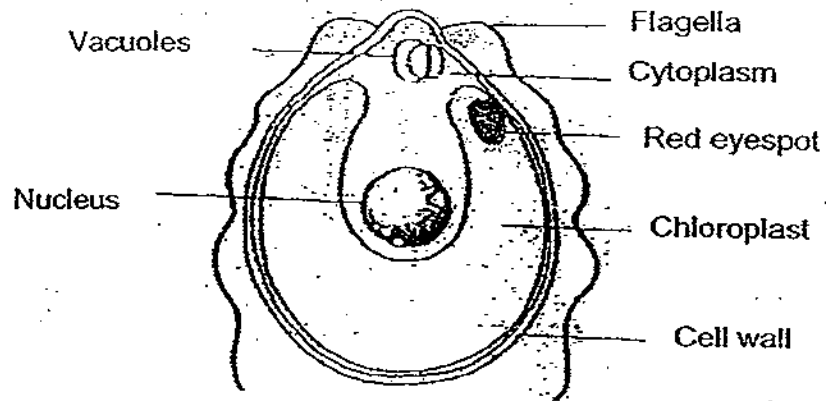


Setup Y

- (a) What would Pei Hwa notice about the limewater in test tube B in both setups? [1]
- (i) Limewater in test tube B in setup X: _____
- (ii) Limewater in test tube B in setup Y: _____
- (b) Explain your answer in (a). [2]

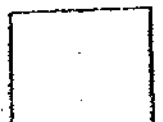


32. The diagram below shows a single-celled organism which lives in pond water.

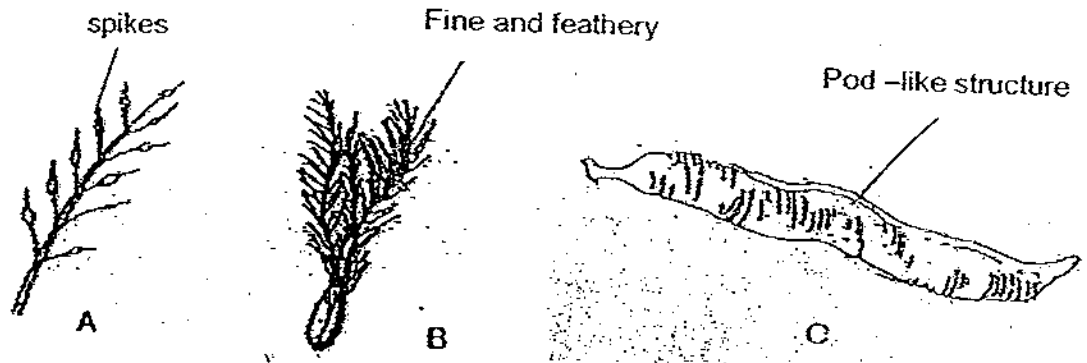


- (a) Is this single-celled organism a plant or an animal? Give 2 reasons to justify your answer. [1½]

- (b) State one part inside this organism that looks different from the normal type of cell mentioned in your answer in (a). [1]



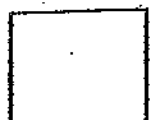
33. The diagrams below show the fruits of three different plants.



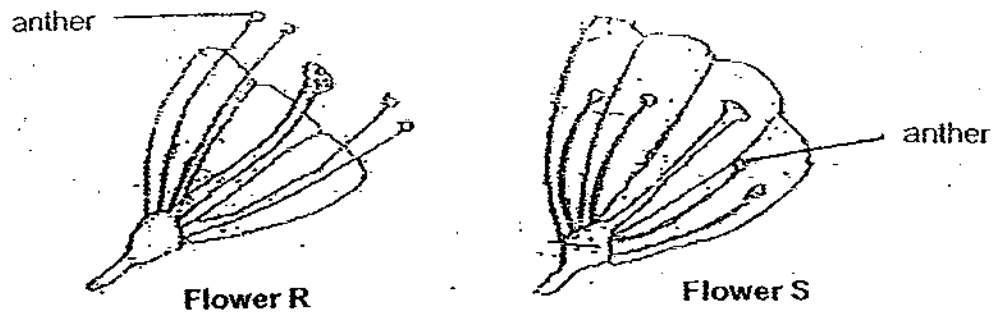
(a) Based on their physical characteristics, identify the method of dispersal of each plant. [1½]

Plant	Method of dispersal
A	
B	
C	

(b) State the advantage that plant B has over plant C in the way it dispersed its fruits. Explain why. [1]



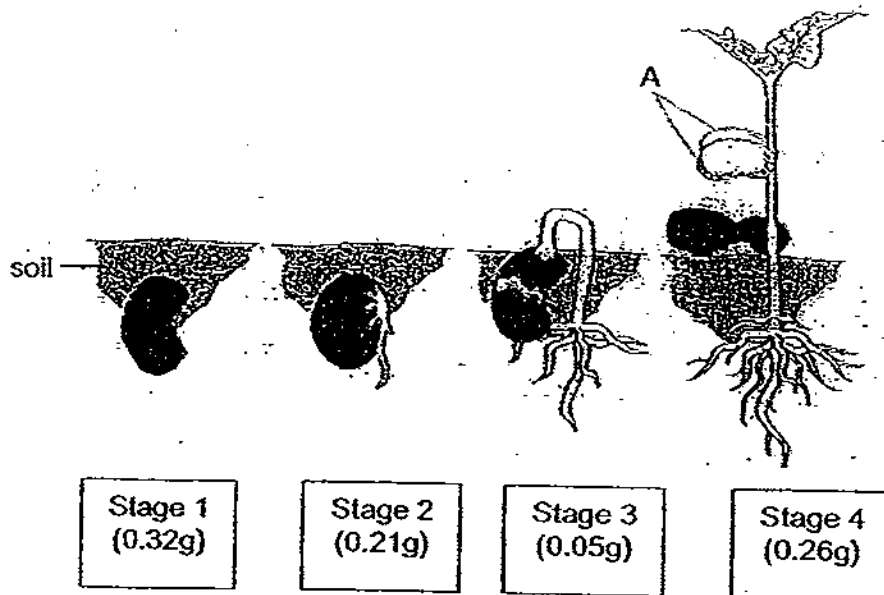
34. The diagrams below show two flowers. One of the flowers is pollinated by wind.



- a) Which flower R or S is not pollinated by wind? [1]

- b) Explain your answer in (a)? [1]

35. The diagram below shows the stages in the growth of a seedling and the amount of starch present at each stage.

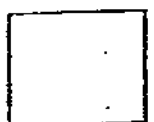


- (a) State the function of the part labelled A.

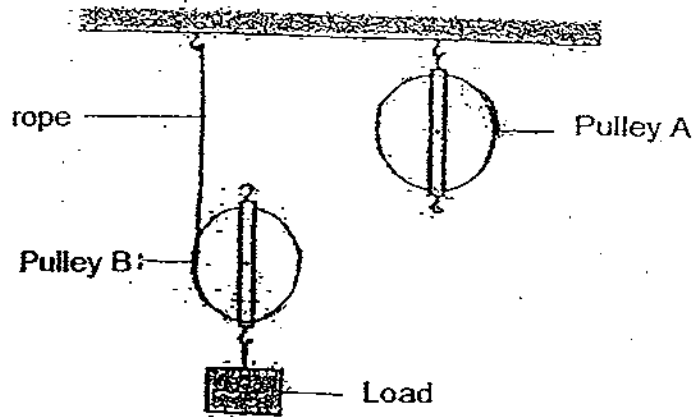
[1]

- (b) Suggest a possible reason for the changes in the starch level present in the seedling over the four stages.

[2]



36. Sonny would like to lift a load using the pulley system as shown in the diagram below. He proceeded to thread a rope around Pulley B.



- (a) Complete the diagram to show how Sonny would thread the rope around the two pulleys to enable him to lift the load. [1]
- (b) State the advantages of using the above pulley system. [1]

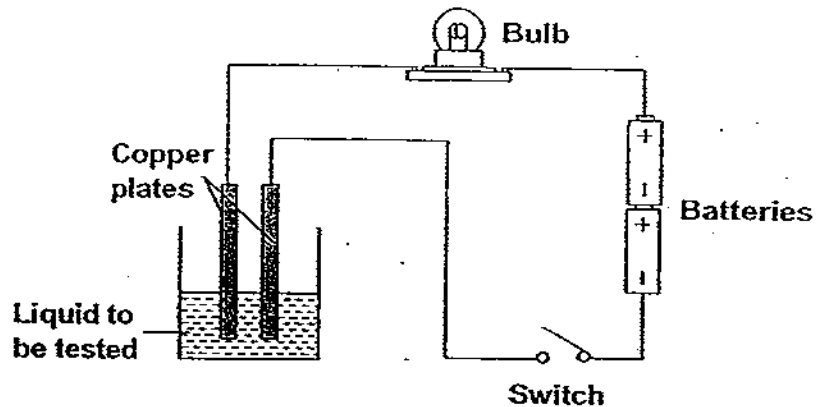
37. The classification table below shows the classification of some animals by their outer covering.

Animals			
Group P	Group Q	Group R	Group S
Platypus	Crab	Lizard	Emu
Penguin	Scorpion	Seahorse	Ostrich

- (a) Identify the animal that has been classified wrongly in the classification table above. [1]
- (b) In which group should this animal be classified? [1]
- (c) Suggest another animal that could be placed in group Q. [1]



38. Tong Yann set up an experiment using the apparatus as shown below. The bulb lighted up when the switch is closed.



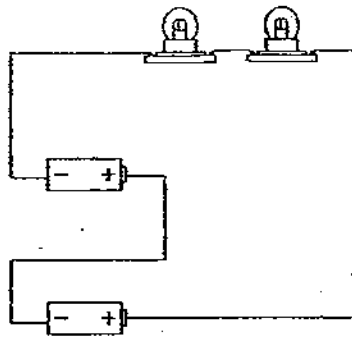
Using the same setup above, Tong Yann tested 3 different types of liquids, one at a time, and recorded the brightness of the bulb in the table below.

Types of liquid	Brightness of the bulb		
	Dim	Bright	Very bright
R		✓	
S	✓		
T (Salt Solution)			✓

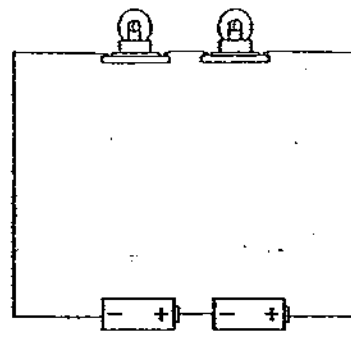
- (a) Based on the above results, what could Tong Yann conclude about the electrical conductivity of liquids R, S and T? [1]
-
- (b) Explain why Tong Yann would conclude that it is dangerous to swim in the sea when a storm is brewing. [1]
-



39. Nadia wanted to find out if the arrangement of the batteries would affect the brightness of the bulbs. Using the same electrical components, she set up 2 circuits, A and B, as shown below.



Circuit A

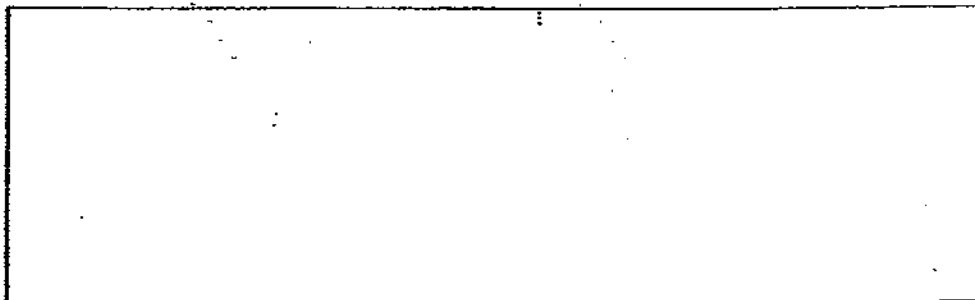


Circuit B

Nadia concluded that the arrangement of the batteries does not affect the brightness of the bulbs.

- (a) Nadia's teacher told her that she had made the wrong conclusion. What was her teacher's reason for saying so? [1]

- (b) Draw a circuit diagram in the space below to show what the circuit arrangement in B should be for Nadia to conduct a fair test. [1]



- (c) Nadia then went on to test if the number of batteries would affect the brightness of the bulbs. She added two more batteries to Circuit A. She noticed that the bulb shone brightly for a while before blacking out. Explain what had happened. [1]



40. Study the objects given below.

Paper plate	Steel bar	Silk blouse
Coloured plastic bag	Car tyres	Glass fish tank

Smith and Will were asked to group the above objects into two groups.

Smith grouped the objects in the following way:

Group A	Group B
Silk blouse	Steel bar
Glass fish tank	Car tyres
Coloured plastic bag	Paper plate

Will grouped the objects in the following way:

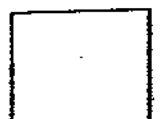
Group C	Group D
Car tyres	Steel bar
Silk blouse	Glass fish tank
Paper plate	Coloured plastic bag

- (a) What property of the objects has Smith used to classify them into Groups A and B? [1]

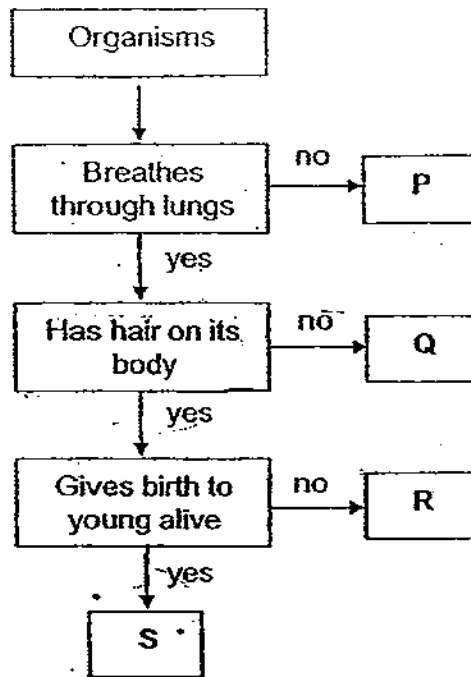
- (b) Will has grouped the objects into Groups C and D. Suggest a suitable heading for Groups C and D. [1]

Group C: _____

Group D: _____

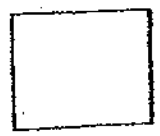


41. The chart below shows how some organisms are differentiated.

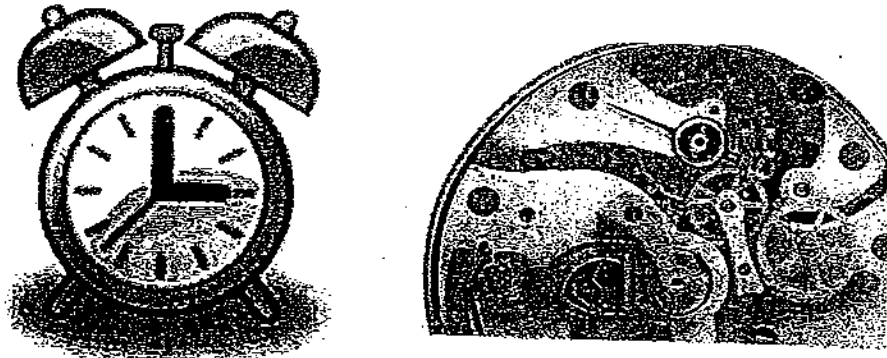


Based on the information above, answer the following questions:

- (a) Identify the characteristic(s) that is/are common for both organisms R and S. [1]
-
- (b) Which letter, P, Q, R or S, would best represent "mudskipper"? [1]
-



42.



The diagram above shows the front and back of a wind-up clock that Niki used for an experiment. Below are the notes she made of her experiment. The clock was wound at 8am every morning.

Niki then presented her results in a table as shown below.

Days	Number of turns given to the key	When the clock stopped moving
Tuesday	3	2pm
Wednesday	7	10pm
Thursday	?	6am the next morning
Friday	14	12pm on Saturday

- (a) How many turns of the key did Niki most probably give to the clock on Thursday?

[1]

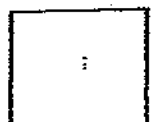
- (b) What pattern can be observed between the number of turns of the key and how long the clock will run?

[1]

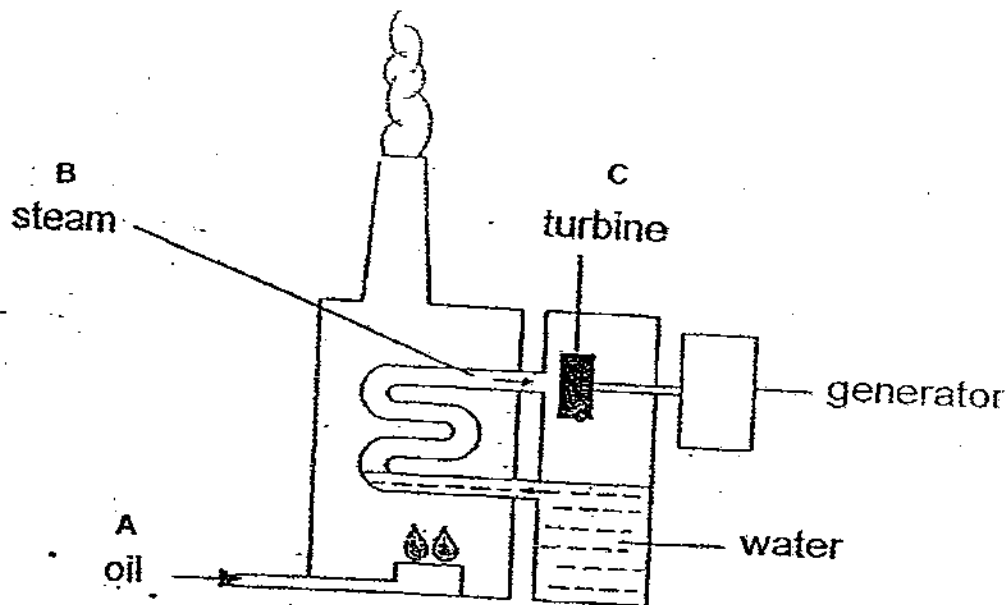
- (c) Complete the energy changes after the key was turned.

[1½]

_____ energy → _____ + _____ energy

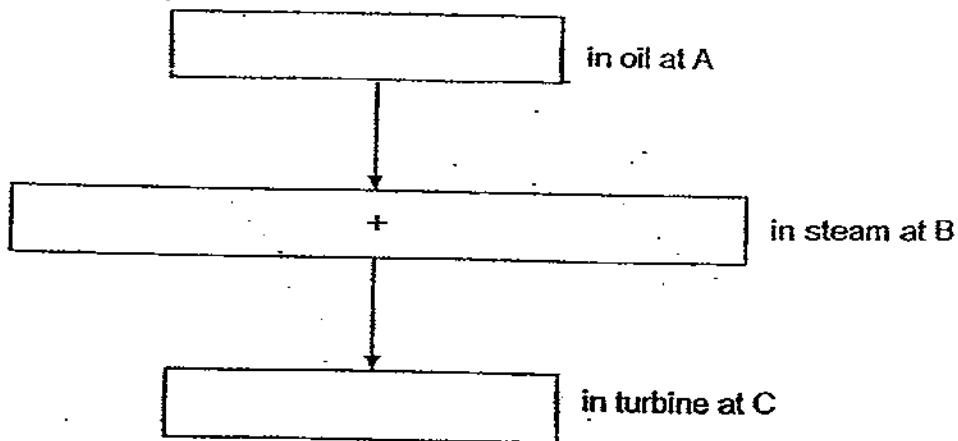


43. The diagram shows the main parts of a power station. Oil is burned to change water into steam. The steam is then used to turn the turbin...



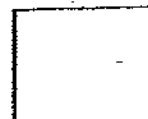
- (a) State the forms of energy present from A to C.

[2]

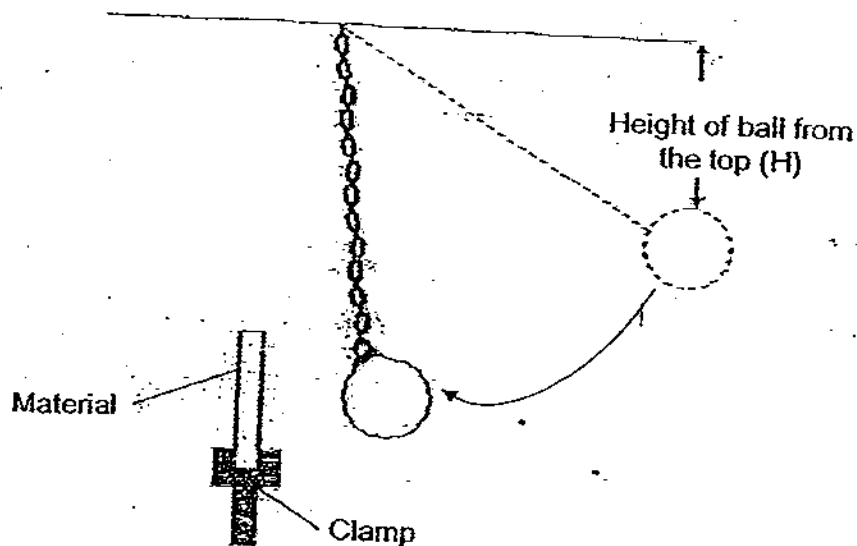


- (b) What is the relationship between the amount of oil burnt and the speed at which the turbine would turn?

[1]



44. A metal ball is hung from a support with a chain. It is then raised to a certain level as shown below and allowed to drop. As the metal swings downwards, it hits a piece of material that is put in its path. The height of the ball from the top is varied till the downward swing of the ball breaks the piece of material. The process is repeated with different types of materials. The process is repeated with different types of materials.

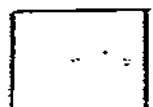


The results of the experiment are recorded in the table below.

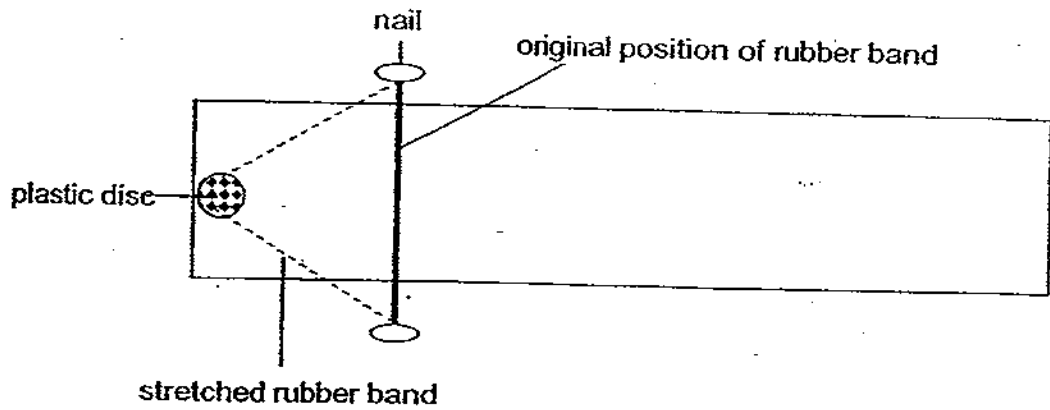
Types of materials	H (cm)
E	22
F	8
G	30
H	41

- (a) Which material (E, F, G or H) has the least strength? [1]

- (b) Would the mass of the metal ball affect the value of H in the above experiment? Explain your answer. [1½]

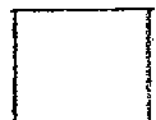


45. A rubber band was stretched across a strip of wood and a plastic disc was then placed in the middle of this rubber band. The disc was then pulled backwards to stretch the rubber band before it was released as shown below. The distance travelled by the disc across the wooden surface was then recorded. The experiment was repeated with different number of rubber bands.

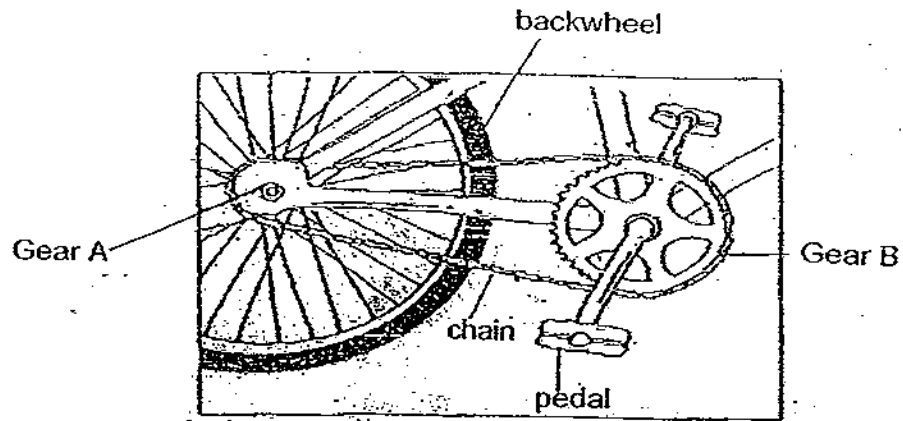


- (a) What is the likely relationship between the number of rubber bands used and the distance travelled by the disc? [1]

- (b) Give a reason for your answer in (a)? [1]

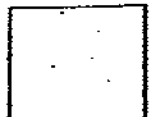


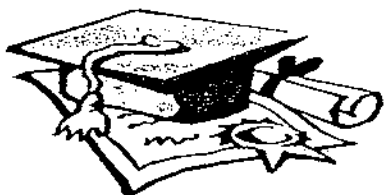
46. The diagram below shows the gear system of a bicycle.



- (a) Gear A and B are not of the same size. Explain how this makes cycling easier. [1]
-
- (b) Based on the above diagram, name another simple machine, other than gears, that is at work here. [1]
-

~~~ End of Paper ~~~





# ANSWER SHEET

**EXAM PAPER 2009**

**SCHOOL : CHIJ PRIMARY**

**SUBJECT : PRIMARY 6 SCIENCE**

**TERM : CA1**

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Q18 | Q19 | Q20 | Q21 | Q22 | Q23 | Q24 | Q25 | Q26 | Q27 | Q28 | Q29 | Q30 |
| 1   | 3   | 4   | 2   | 2   | 4   | 4   | 4   | 1   | 4   | 4   | 3   | 2   |

31)a)i)It would turn chalky.

ii)It would remain clear.

b)In set-up X, the yeast would feed on the sugar and respiration and give out carbon dioxide which makes limewater chalky and in set-up Y, the yeast have no food and will not be able to respiration and give out carbon dioxide to make the limewater chalky.

32)a)It is a plant cell. It has cell wall and chloroplast unlike an animal cell which does not have.

b)Red eyespot.

33)a)A: Animal B: Wind C: Splitting

b)Plant B could disperse its fruits further away from the parent plant as the fruit has fine and feather structures to enable it to float.

34)a)Flower S.

b)Flower S stigma is longer than anthers and if it was wind pollinated, the anthers should be longer than the stigma so that the wind can blow the anthers pollen grain and pollinated its stigma or other plant's stigma.

35)a) When the seedling had not grown its own leaves to produce food itself, A will provide it with starch to grow.

b) From stage 1 to stage 3, the seedling cannot make its own food and relies on A which has stored starch to survive, but in stage 4, it has grown its leaves and is able to photosynthesize to make its own food, therefore, the amount of starch present in stage 4 increases.

36)a) 

b) It changes the direction of the force and reduces the needed effort to lift the load.

37)a) Penguin.

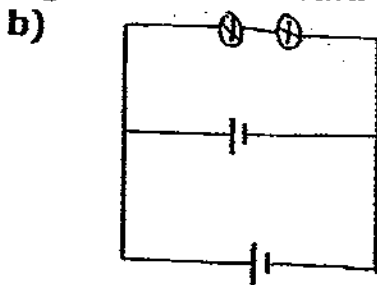
b) S.

c) Snail.

38)a) S is a poor conductor of electricity, R is a good conductor of electricity and T is the best conductor of electricity.

b) Salt solution the sea is a good conductor of electricity and during the storm a lightning might electrocute a person swimming in the sea.

39)a) Nadia had arranged both of each circuit batteries in series arrangement and would not be able to conduct a fair test.



c) The bulb has fused as too much electrical current was flowing through it.

40)a) The amount of light allowed to pass through.

b) C: Once alive. D: Never alive.

41)a)They breathe through lungs and have hair on their body.  
b)P.

42)a)11 turns.

b)The more the number of the turns of the longer the clock will run.

c)Potential energy  $\rightarrow$  Kinetic energy + Sound energy

43)a)Chemical energy  $\rightarrow$

↓  
Kinetic + heat energy  
↓

Kinetic energy

b)The more amount of oil burnt, the faster the turbine would turn.

44)a)H.

b)Yes. The ball with greater mass has more gravitational potential energy (when raised) which will be converted to greater kinetic energy when released. Material can be broken when it is the longest/ greatest.

45)a)The more rubber bands used, the further the distance travelled by the plastic disc.

b)The more rubber bands stretched the more potential energy they will possess and this will be converted to kinetic energy of the disc, causing it to move further.

46)a)When Gear B makes one turn, Gear A turn more turns than Gear B, causing the back wheel to move more.

b)Wheel and axle.

