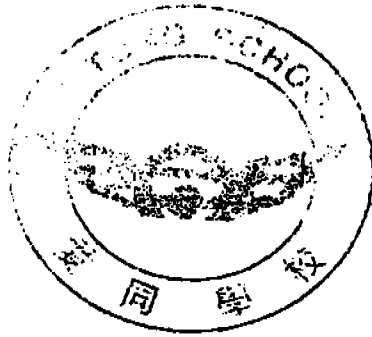


SA2



## AI TONG SCHOOL

2004 SEMESTRAL ASSESSMENT ( 2 )

PRIMARY FIVE

SCIENCE

**DURATION : 1 HR 45 MIN**

**DATE: 1 NOV 2004**

### **INSTRUCTIONS**

**Do not open the booklet until you are told to do so.**

**Follow all instructions.**

**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. Which one of the following statements is true about the Sun?

- (1) The Sun is one of the planets in the Solar System.
- (2) The Sun reflects light from the Earth.
- (3) The Sun revolves around the Moon.
- (4) The Sun is at the centre of the Solar System.

2. Satellites are used for \_\_\_\_\_

- (A) communication
  - (B) space exploration
  - (C) weather forecasting
  - (D) making observations of other planets in the Solar System.
- (1) A and B only                                      (2) A, B and D only  
(3) B, C and D only                                (4) A, B, C and D

3. Ray saw a full moon on the 15<sup>th</sup> of the month. When will he see the full moon again?

- (1) about 1 week later    (2) about 2 weeks later
- (3) about 3 weeks later    (4) about 4 weeks later

4. Which part of a cell does not correctly match its function?

	Part of a cell	Function
(1)	Cytoplasm	It allows substance such as food and oxygen to go in and out of the cell.
(2)	Cell wall	It gives the plant cell its shape.
(3)	Chloroplasts	It contains chlorophyll that captures sunlight for plants to make food.
(4)	Nucleus	It controls everything that happens inside the cell.

5. Which one of the following parts of a microscope is used to adjust the sharpness of the image?

(1) Stage

(2) Eye piece

(3) Focus knobs

(4) Objective lens

6. When only one parent is needed to produce an offspring, it is called \_\_\_\_\_ reproduction.

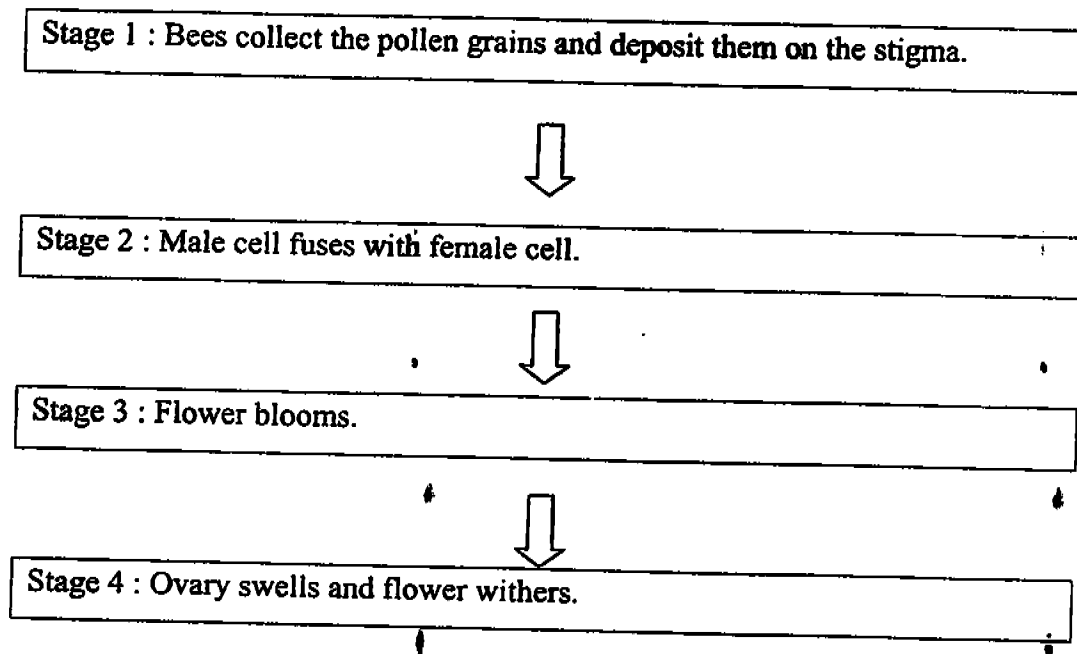
(1) asexual

(2) lateral

(3) sexual

(4) fertilised

7. Study the flow chart below. Which stage should not be included?



(1) Stage 1

(2) Stage 2

(3) Stage 3

(4) Stage 4

8. Which of the following statement(s) about plant reproduction is/are true?

- (A) Flowering plants can reproduce from seeds only.
- (B) Non-flowering plants can reproduce from both seeds and spores.
- (C) Ferns reproduce from the spores on the leaf surfaces.
- (D) Suckers develop from ~~X~~ the stem of a plant.

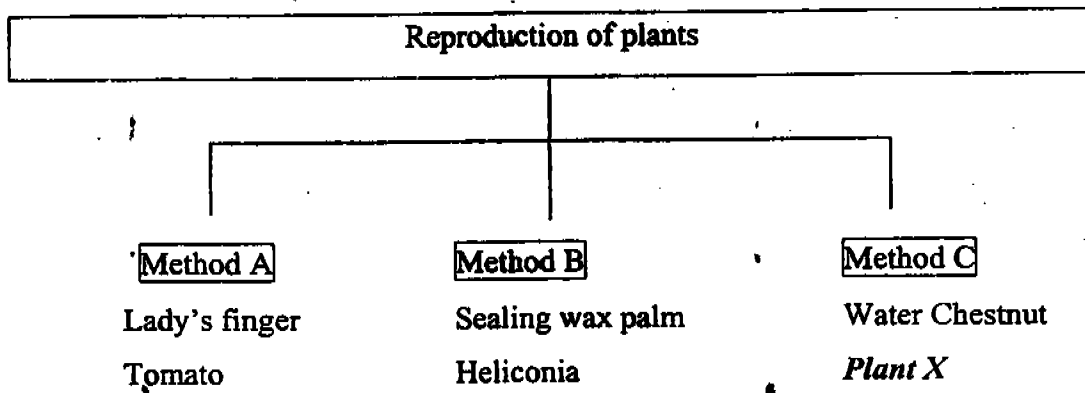
(1) A only

(2) B and C only

(3) D only

(4) A, C and D only

9. Study the following flow chart carefully. What could Plant X be?



(1) Ginger

(2) Bryophyllum

(3) Banana

(4) Sweet potato

10. Which one of the following statement(s) about the reproduction of babies is/are true?

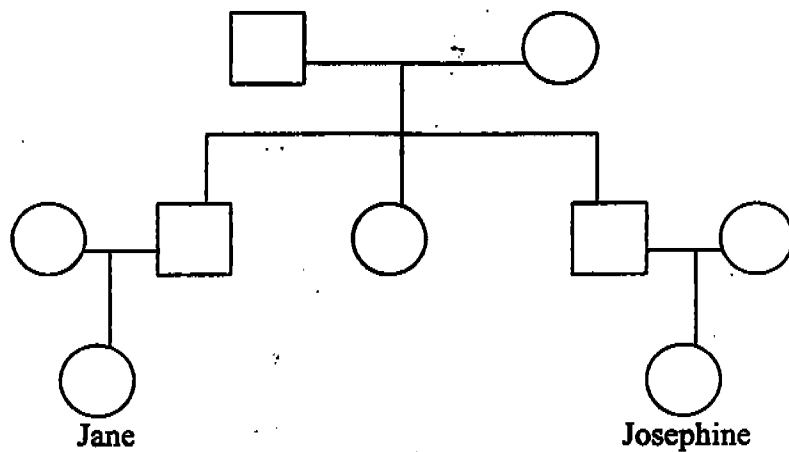
- (A) The foetus is developed from an egg cell and a sperm cell.
- (B) The foetus stays in the uterus for about nine months.
- (C) The foetus receives food and oxygen from the mother through the umbilical cord.

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

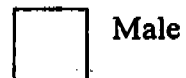
11. Which one of the following is correct?

	Dispersed by wind	Dispersed by animals	Dispersed by water
(1)	Shorea	Mango	Angsana
(2)	Lalang	Love grass	Mangrove
(3)	Balsam	Pong Pong	Coconut
(4)	Shorea	Papaya	Mimosa

12. Study Josephine's family tree carefully.



Key



Male

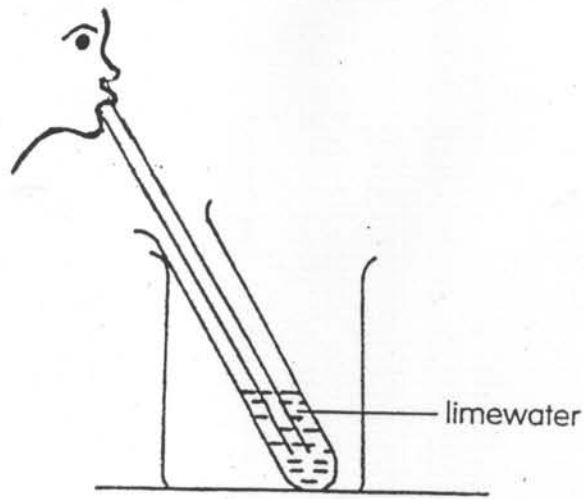


Female

Josephine has some physical characteristics that resemble her cousin, Jane. This is because they \_\_\_\_\_.

- (1) have the same parents
- (2) have the same grandparents
- (3) their mothers are sisters
- (4) Jane's mother and Josephine's father are related

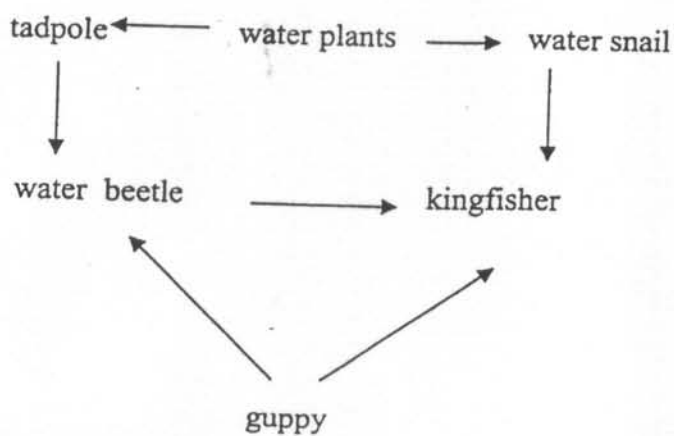
13.



Peter blew into a test-tube containing limewater as shown in the diagram above. The limewater turned chalky. The \_\_\_\_\_ in the air Peter breathed out caused the limewater to turn chalky.

- (1) oxygen
- (2) bubbles
- (3) water vapour
- (4) carbon dioxide

14. In the food web below, which animal population(s) will increase in number if there is an increase in the population of kingfishers?

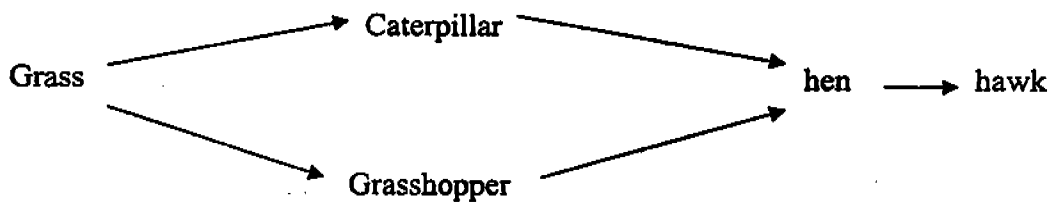


- (1) Tadpole
- (2) Water beetle
- (3) Water snail
- (4) Guppy

15. Which one of the following comparisons between respiration and photosynthesis of plants is correct?

	Respiration	Photosynthesis
(1)	Produces carbon dioxide.	Produces carbon dioxide.
(2)	Produces oxygen.	Produces carbon dioxide.
(3)	Takes place all the time.	Takes place only when there is light.
(4)	Takes place only when there is no light.	Takes place all the time.

16. Study the food web below carefully.



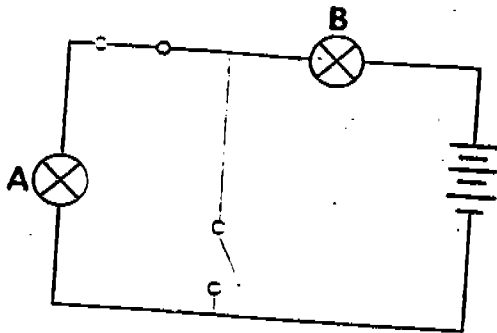
In the above food web, which organism is both a prey and a predator?

- (1) Hen
- (2) Hawk
- (3) Caterpillar
- (4) Grasshopper

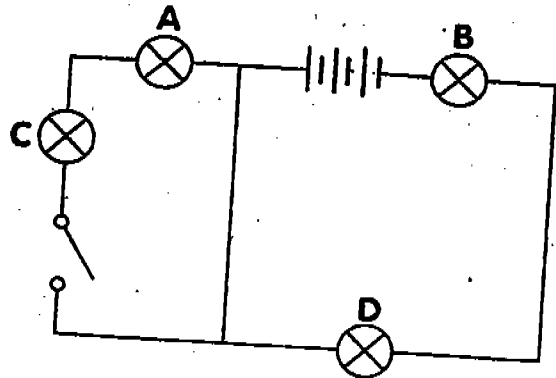


17. The circuits shown below have been arranged exactly as shown with some of the switches opened or closed. Study the circuits carefully. Which arrangements (A), (B), (C) or (D) will show at least two light bulbs being lit up.

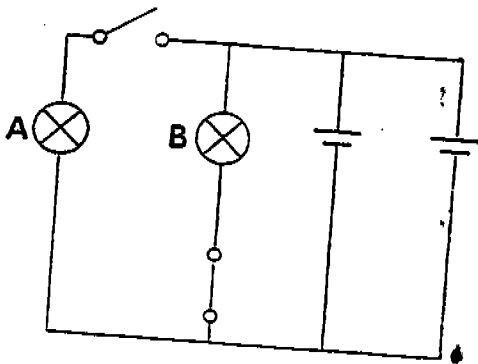
(A)



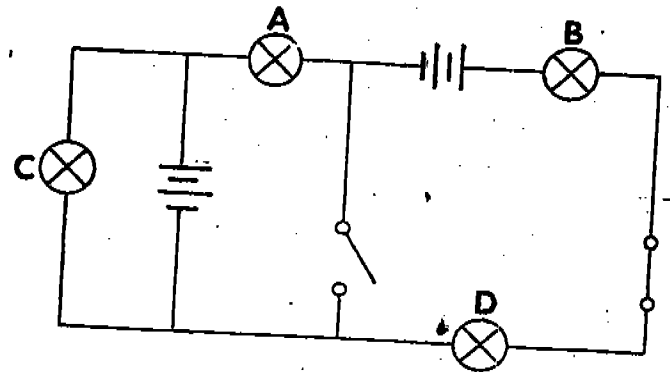
(B)



(C)



(D)



(1) A and B only

(3) A, B and D only

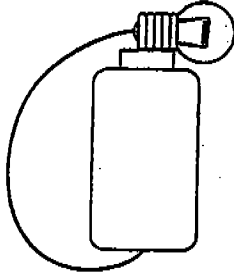
(2) A, B and C only

(4) A, B, C and D

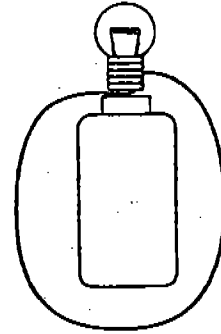
( )

18. In which of the following circuits shown below would the bulb light up?

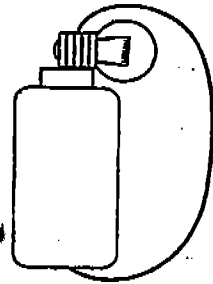
(A)



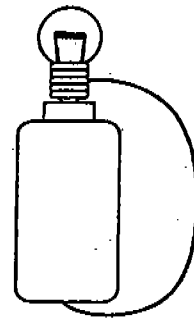
(B)



(C)



(D)

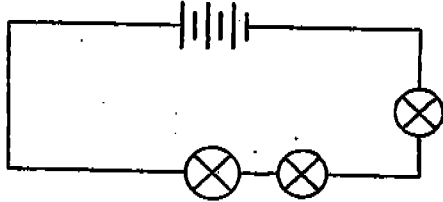


- (1) A only
- (2) A and D only
- (3) A, B and C only
- (4) B, C and D only

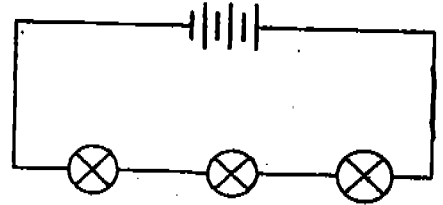
( )

19. What two of the circuit diagrams shown below can be used to compare how the arrangement of bulbs affect the brightness of the bulb?

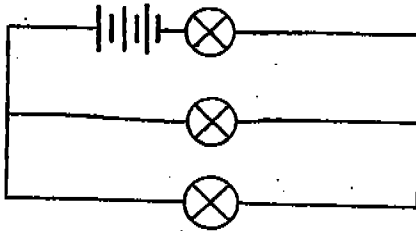
(A)



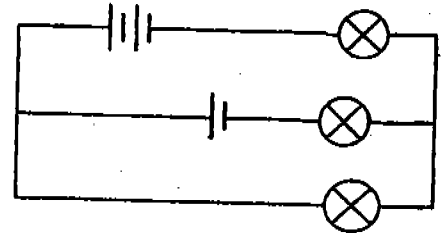
(B)



(C)



(D)



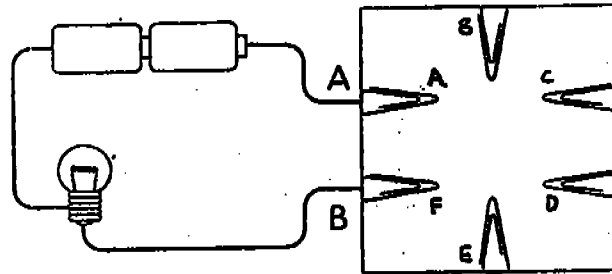
- (1) A and B only
- (3) B and C only

- (2) A and C only
- (4) B and D only

20. The materials used to make the pins of a plug must be \_\_\_\_\_

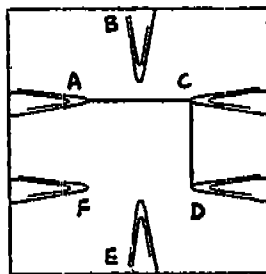
- (1) made only of steel
- (2) able to create electricity
- (3) able to conduct electricity
- (4) able to prevent the flow of electricity

21. When GuoYang connected the circuit tester to paper clips A and F of a circuit card, the bulb lit up.

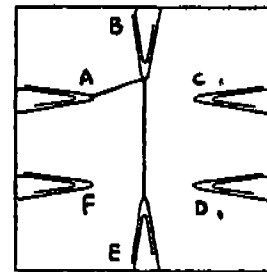


Which one of the following shows how the wires in the circuit card were connected to the paper clips?

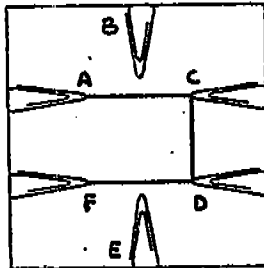
(1)



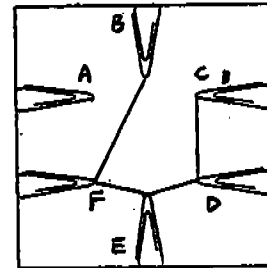
(2)



(3)



(4)



( )

22. Which one of the following uses the principle of a lever to work?

(1) Door wedge

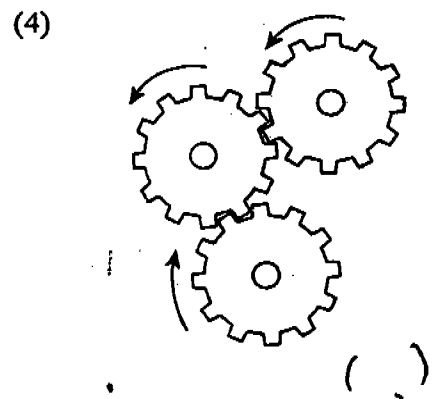
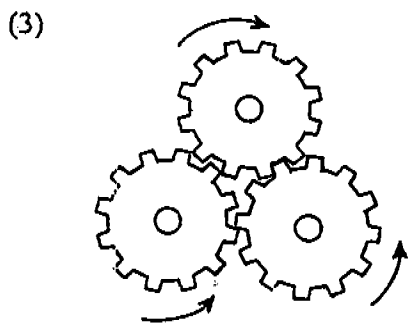
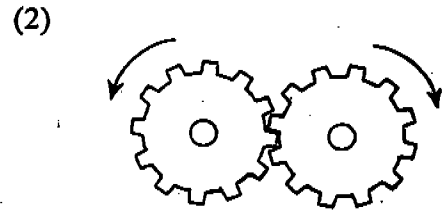
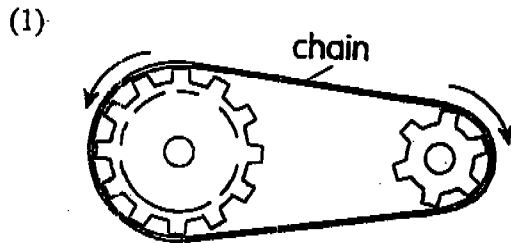
(2) Screwdriver

(3) Pencil sharpener

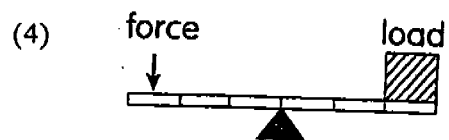
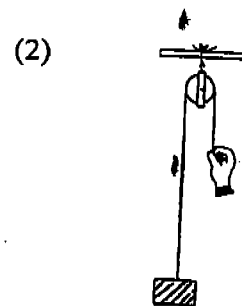
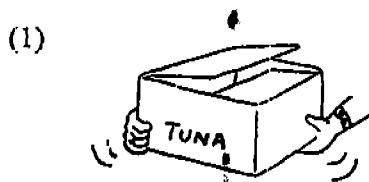
(4) Fishing rod

( )

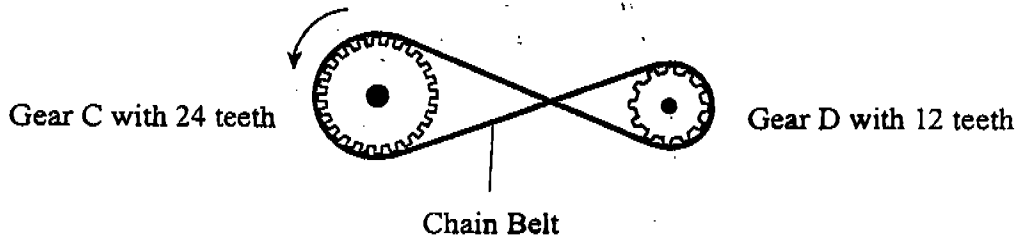
23. Which one of the following diagrams shows the gears moving in the correct directions?



24. In which one of the following diagrams is the force used smaller than the load?



25. The diagram below shows two gears linked by a bicycle chain belt.

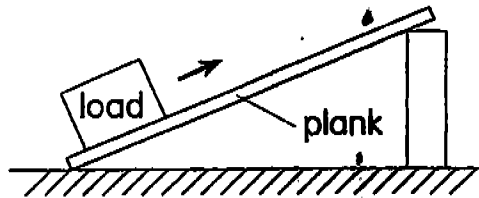


When gear C turns anti-clockwise, gear D will turn \_\_\_\_\_

- (1) in the same direction but twice as fast as gear C
- (2) in the opposite direction but twice as fast as gear C
- (3) in the same direction and at the same speed as gear C
- (4) in the opposite direction and at the same speed as gear C

( )

26.



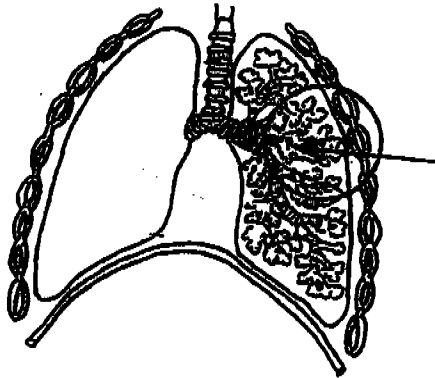
Susan carried out the experiment shown above to study how sprinkling powder on the surface of a plank affects the effort needed to move a load. Which one of the following variables must be kept the same for the experiment to be a fair one?

- A) The type of surface.
- B) Weight of the object.
- C) Slope of the ramp
- D) Type of load

- (1) A and B only
- (3) A, B and C only

- (2) B and C only
- (4) B, C and D only

27. The arrow in the diagram below is pointing at \_\_\_\_\_



- (1) stomata on a leaf
- (3) air sacs in the lungs

- (2) chambers in a heart
- (4) capillaries in the lungs

28. The substances transported by blood include \_\_\_\_\_ ( )

- A) water
- B) oxygen
- C) digested food
- D) carbon dioxide
- E) waste materials

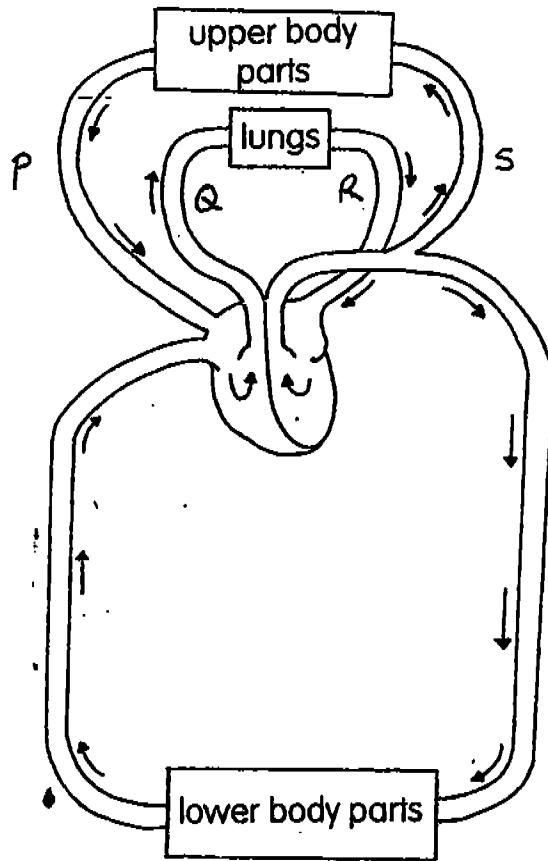
- (1) A, B and D only
- (3) B, C, D and E only

- (2) A, D and E only
- (4) All of the above

29. When the diaphragm in your chest cavity contracts and relaxes, \_\_\_\_\_ ( )  
takes place.

- (1) respiration
- (2) circulation
- (3) breathing
- (4) photosynthesis

30. The diagram below represents our circulatory system. Which pair of blood vessels always carries blood that is rich in oxygen?



- (1) P and Q only
- (3) Q and S only

- (2) Q and R only
- (4) R and S only

( )



Name : \_\_\_\_\_ ( )

Class P5 ( )

**Section B : 40 marks**

**Read the questions carefully and write your answers in the spaces provided.**

31. State whether the following statements are "True" or "False". [2]

(a)	The Earth is the only planet in the Solar System.	
(b)	Oxygen makes up about one-fifth of the Earth's atmosphere.	
(c)	The Sun is made up of rocks, metals and gases.	
(d)	The Moon revolves round the Earth.	

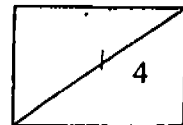
32. Compare a plant cell and an animal cell.

(a) Write down one similarity. [1]

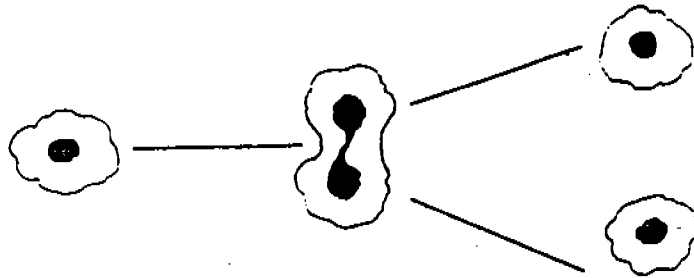
\_\_\_\_\_

(b) Write down one difference. [1]

\_\_\_\_\_



33. The diagram below show how cells in our bodies divide as we grow.



(a) Which part of the cell controls cell division?

[1]

\_\_\_\_\_

(b) After three cell divisions, how many cells would you get from one cell?

[1]

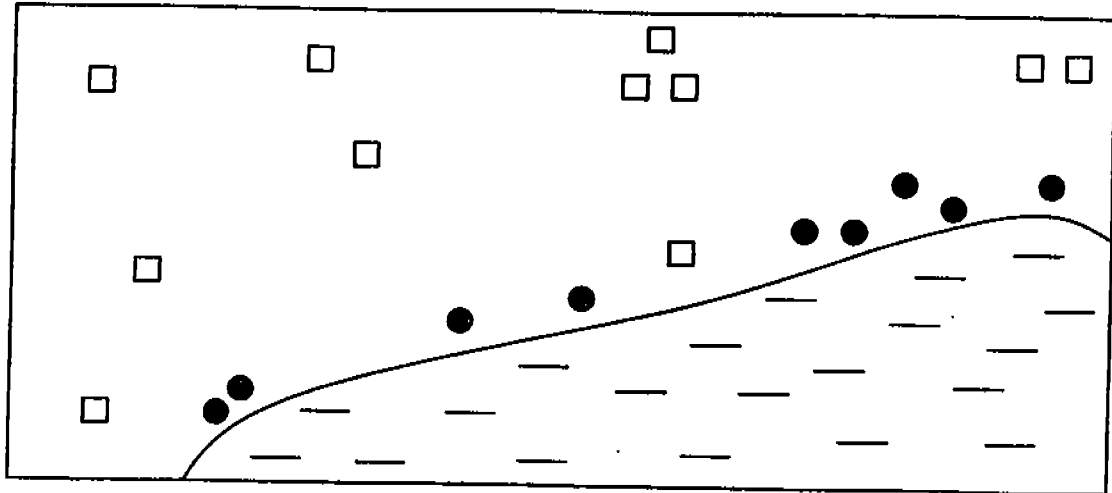
\_\_\_\_\_

(c) Name one single-cell organism that reproduces by cell division?

[1]

\_\_\_\_\_

34. The diagram shows part of an island where two types of plants (□, ●) are growing.



(a) How are the fruits or seeds of each type of plant most likely dispersed?

(i) □ \_\_\_\_\_ [1]

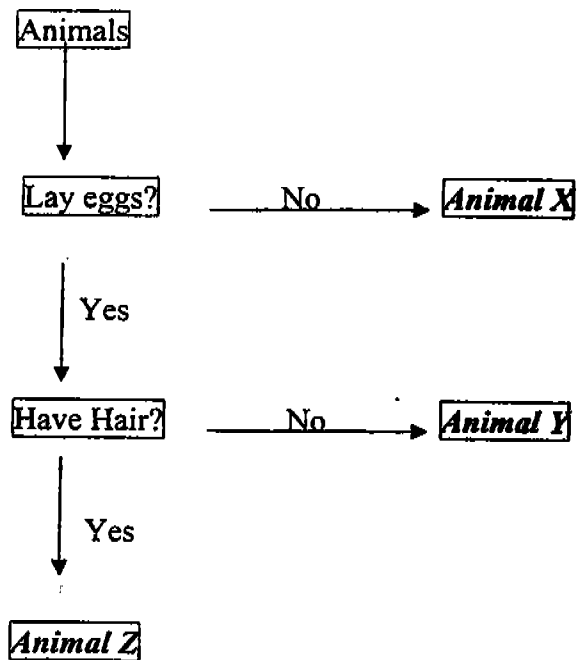
(ii) ● \_\_\_\_\_ [1]

(b) Give one example of each plant.

(i) □ \_\_\_\_\_ [1]

(ii) ● \_\_\_\_\_ [1]

35. The flow chart shows how three animals, Animal X, Animal Y and Animal Z reproduce.



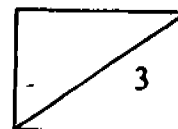
Catfish	Deer	Platypus
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Using the animals given in the above box, name Animal X, Animal Y and Animal Z.

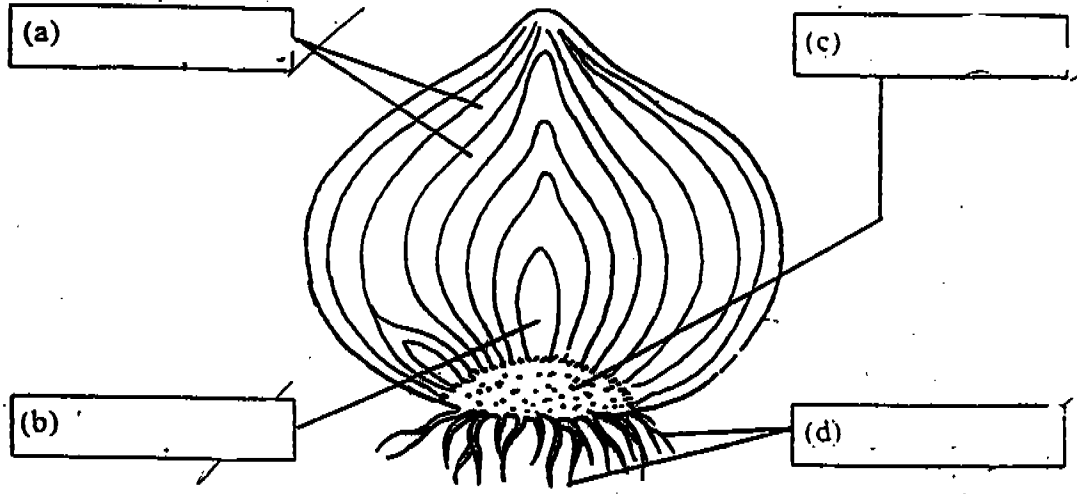
(a) Animal X : \_\_\_\_\_ [1]

(b) Animal Y : \_\_\_\_\_ [1]

(c) Animal Z : \_\_\_\_\_ [1]

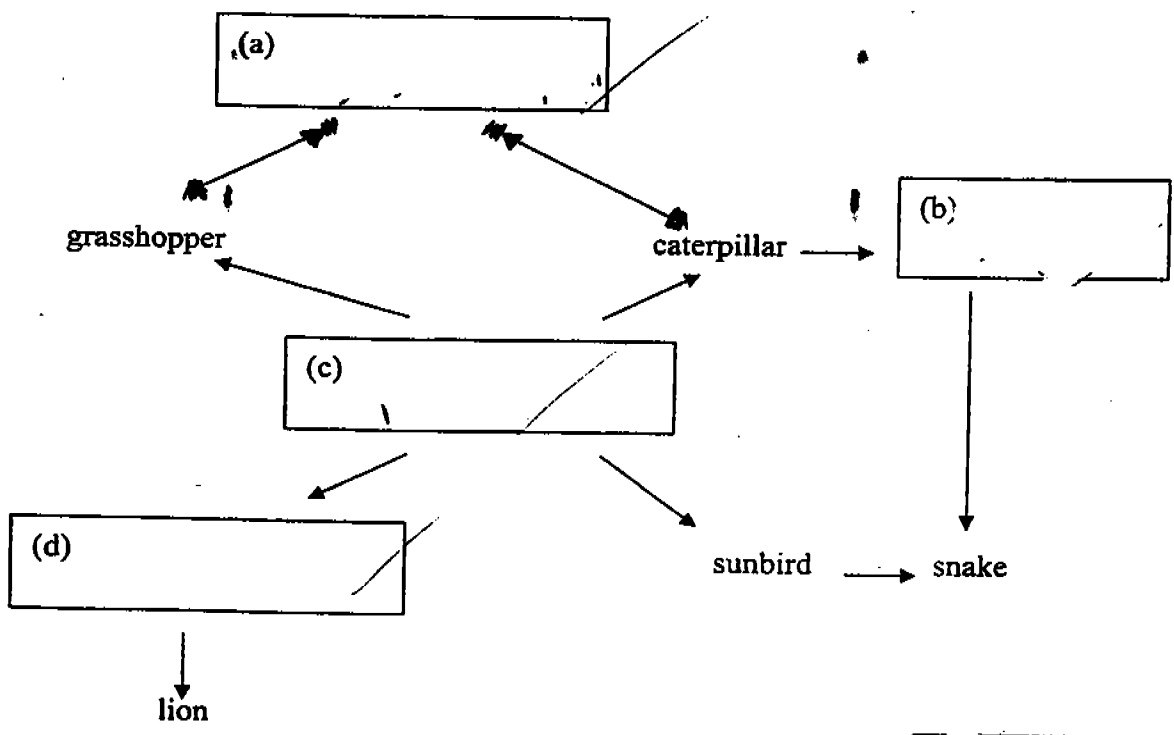


36. The picture below shows the cross-section of an onion. Label the parts which are marked. [2]



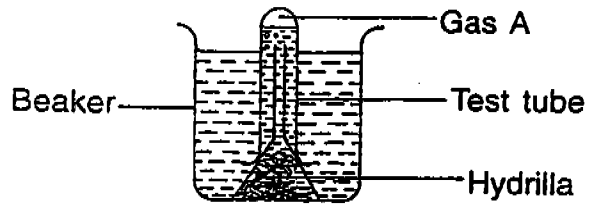
37. Complete the food web using the words given in the box below. [2]

~~cow~~      ~~frog~~      ~~mynah~~      ~~plant~~



4

38. Anderson set up the experiment shown below.

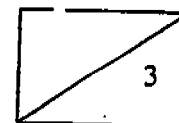


(a) What is Gas A ?

[1]

(b) What must the plants take in from the environment so that it can produce Gas A?

[2]



39. Peter tested 3 objects with a circuit tester and observed whether or not the bulb lit up. The results are shown below.

Object	Did the bulb light up?
1	No
2	Yes
3	No

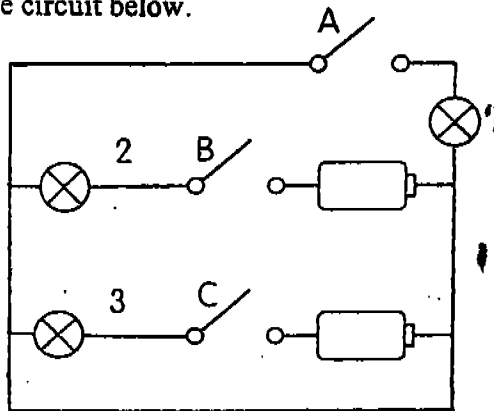
(a) What was Peter trying to find out? [2]

(b) Name 2 types of materials that object 2 could be made of.

(i) \_\_\_\_\_ [1]

(ii) \_\_\_\_\_ [1]

40. Study the circuit below.

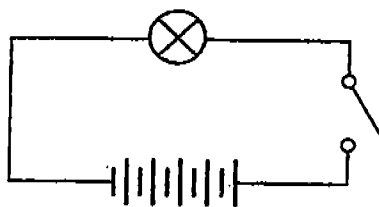


(a) Which bulb(s) will light up if switches B and C are closed? [1]

\_\_\_\_\_

(b) What will happen if switches A and B are closed and only switch C is open? [1]

41. Zhi Yang constructed the simple circuit shown below. He observed the brightness of the bulb after he closed the switch.



- (a) What did he observe? [1]

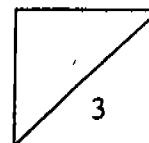
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- (b) Explain your answer in (a) [2]

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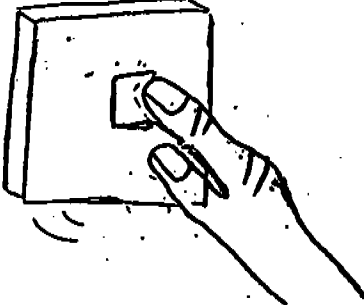
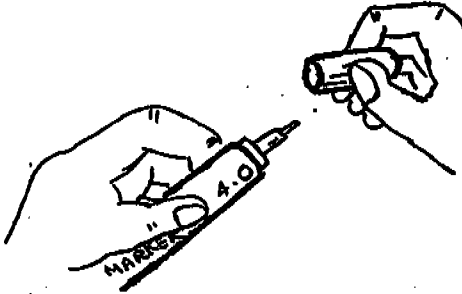
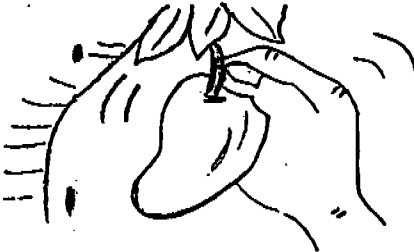
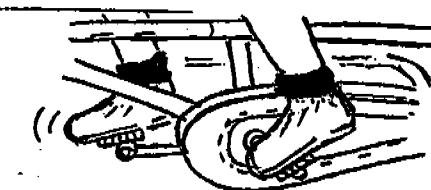
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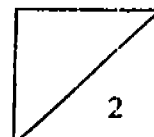




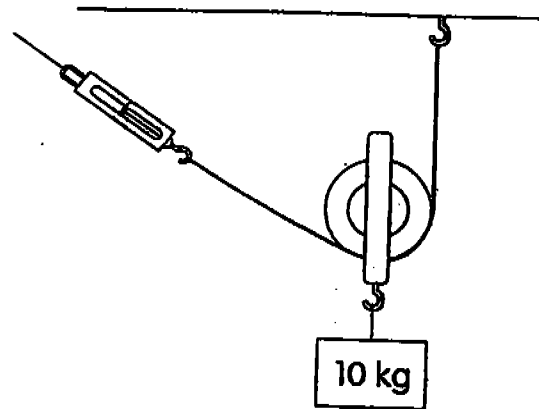
42. Write 'push or 'pull' in the box beside each picture.

[2]

 <p>Switching on the light</p>	
 <p>Removing the cap of a marker</p>	
 <p>Plucking a fruit</p>	
 <p>Pedalling a bicycle</p>	



43. Look at the set-up below.



(a) What type of pulley is shown?

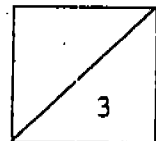
[1]

(b) What is the advantage of using this type of pulley?

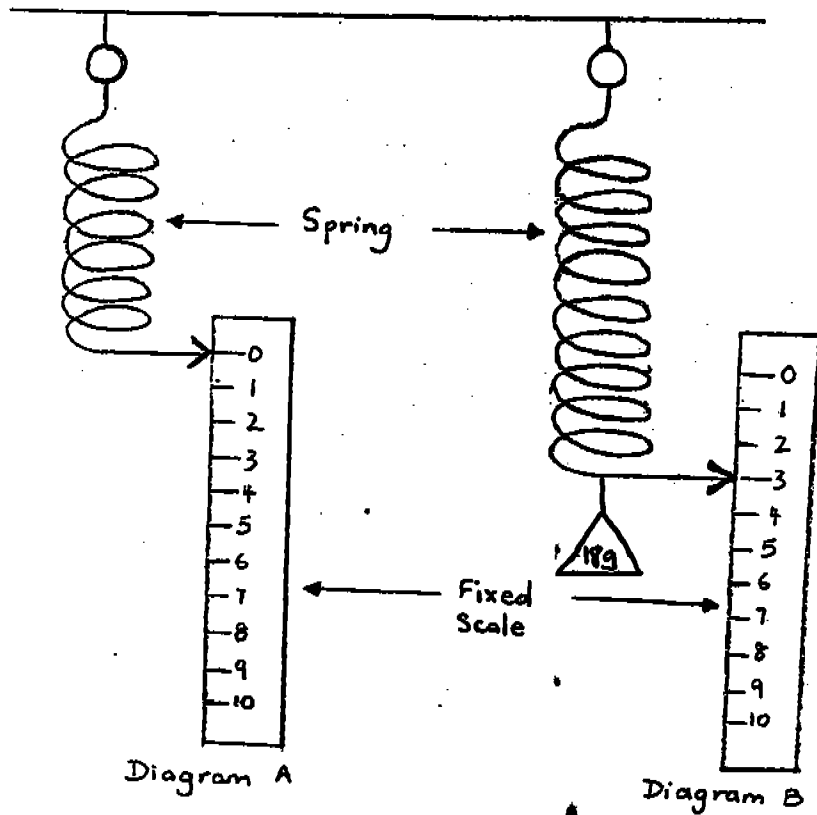
[1]

(c) Compare the distance moved by the effort and the distance moved by the load.

[1]



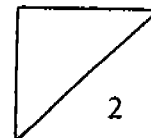
44.



In diagram A above, the pointer points at 0 on a fixed scale when there is no load attached to the spring. Diagram B shows the pointer at the third reading when a load of 18 g is hung on the spring.

(a) What caused the spring to extend in Diagram B? [1]

(b) What will the total load be when the pointer points at the eighth reading? [1]



45.

People	Breathing Rates (Average number of times per minute)
Babies	40
5-Year-Old Girls	26
5-Year-Old Boys	26
12-Year-Old Boys	20
40-Year-Old Adults	15

The table above shows the breathing rates of different people when they are resting. What pattern do you notice between the age of people and their breathing rates? [1]

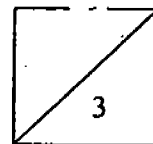
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46. State one difference between the blood carried in an artery and the blood carried in a vein. [2]

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**THE END**  
(Please check your work carefully!)

