



Maha Bodhi School
2009 Semestral Assessment 1
Science

Name : _____ ()

Date : 7 May 2009

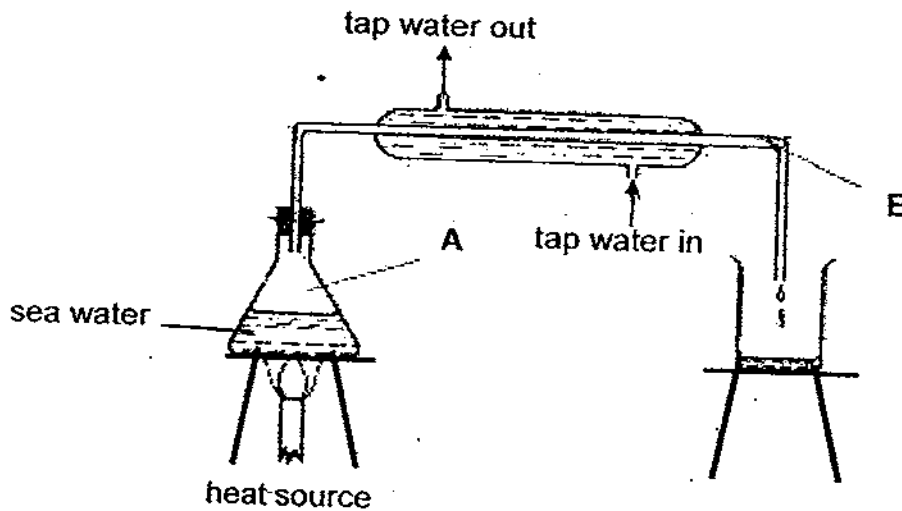
Class : Pr 5 ()

Duration : 1 h 45 min (Parts I & II)

Part I: (60 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 Mark Sheet (OMS).

1. Many countries look for alternative ways of obtaining fresh water. One of the ways is shown in the diagram below.



Which one of the following correctly shows the processes taking place at A and B?

| | A | B |
|-----|-------------|--------------|
| (1) | Boiling | Melting |
| (2) | Boiling | Condensation |
| (3) | Evaporation | Condensation |
| (4) | Evaporation | Melting |

2. Which one of the following statements about **both** boiling and evaporation is **false**?

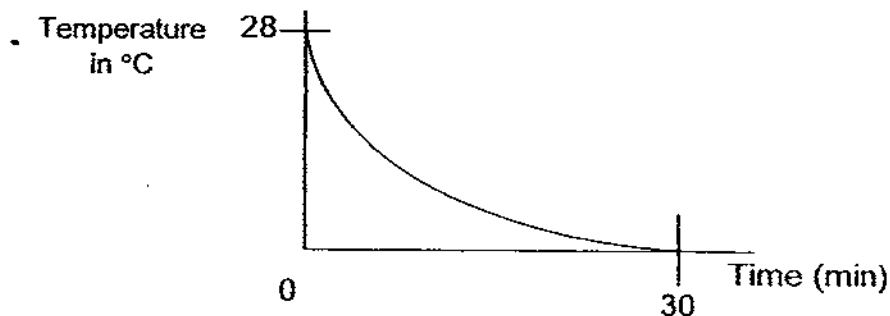
| | Boiling | Evaporation |
|-----|--------------------------------------|--|
| (1) | Takes place in all parts of a liquid | Takes place at the surface of liquid |
| (2) | Occurs at fixed temperature | Occurs below boiling point at all times |
| (3) | Liquid gains heat from surroundings | Liquid loses heat to surroundings |
| (4) | Water changes into steam | Water changes into water vapour |

3. Substance P cannot be compressed. When heated for a while, Substance P will become Substance Q. Substance Q has no definite shape. When heated further, Substance Q will become Substance R, which can be compressed.

Which one of the following **correctly** shows substances P, Q and R?

| | Substance P | Substance Q | Substance R |
|-----|-------------|-------------|--------------|
| (1) | Steam | Water | Water vapour |
| (2) | Ice | Steam | Water |
| (3) | Water | Ice | Steam |
| (4) | Ice | Water | Steam |

4. The graph below shows the change in temperature of water over 30 minutes.



Which one of the following statements is **incorrect**?

- (1) Condensation of water has taken place.
 (2) Water changes state at 30th minute.
 (3) Water loses heat to the surroundings.
 (4) The temperature at 30th minute is also the same as melting point of water.
5. Which of the following conditions **increases** the rate of evaporation?

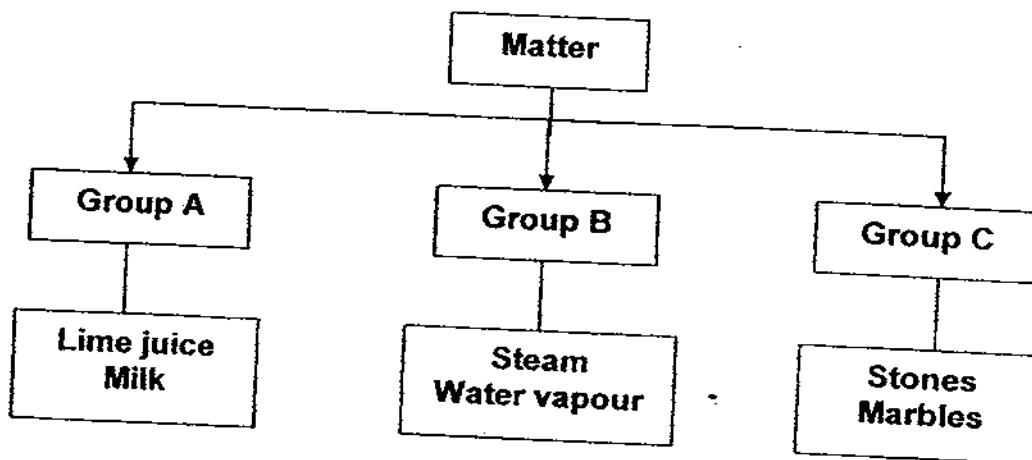
- A: Higher humidity
 B: Larger exposed surface area
 C: Environment with little or no wind
 D: Higher temperature of surroundings

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

6. Which one of the following list is correctly classified?

| | Matter | Non-matter |
|-----|-----------|------------|
| (1) | Magnetism | Heat |
| (2) | Thunder | Dust |
| (3) | Cloud | Fire |
| (4) | Snow | Air |

7. Study the classification chart below.



Which one of the following is correctly classified under the Groups A, B and C?

| | Group A | Group B | Group C |
|-----|--------------|--------------|------------|
| (1) | Sand | Oxygen | Plasticine |
| (2) | Mist | Water bubble | Sand |
| (3) | Water bubble | Oxygen | Snow |
| (4) | Snow | Mist | Plasticine |

8. Zainal wanted to find out if the air in a basketball has mass. He carried out an experiment according to the steps as shown below.

- Step 1: Weigh an inflated basketball and record the mass.
 Step 2: Let the air out, weigh the basketball and record the mass.
 Step 3: Pump air into the same basketball until no more air could be introduced. Then weigh and record the mass of the basketball again.

Which one of the following list is the most likely set of results that he recorded?

| | Mass of basketball (g) | | |
|-----|------------------------|--------|--------|
| | Step 1 | Step 2 | Step 3 |
| (1) | 455 | 465 | 447 |
| (2) | 455 | 448 | 437 |
| (3) | 455 | 426 | 472 |
| (4) | 455 | 460 | 472 |

9. Shufen observed the properties of 3 substances, P, Q and R. She drew a checklist and placed a tick (✓) in the box when she made the observation. Her completed checklist is as follows:

| Observation | P | Q | R |
|--------------------------|---|---|---|
| It occupies space | ✓ | ✓ | ✓ |
| It has a definite shape | ✓ | | |
| It has a definite volume | ✓ | | ✓ |
| It can be compressed | | ✓ | |

Which one of the following list correctly represents substances P, Q and R?

| | P | Q | R |
|-----|----------------|----------------|--------|
| (1) | Paper | Oil | Oxygen |
| (2) | Milk | Carbon dioxide | Cloth |
| (3) | Paper | Oxygen | Oil |
| (4) | Carbon dioxide | Cloth | Milk |

10. Leslie wanted to investigate the transparency of four different liquids A, B, C and D using the set-up shown in the diagram below. He switched on the torchlight and recorded what he saw on the white paper in the table below.

| Liquid | Amount light on white paper |
|--------|-----------------------------|
| A | Faint light |
| B | Bright light |
| C | No light |
| D | Faint light |

He dropped a coin into the four different liquids A, B, C and D.

In which of the following liquids will he not be able to see the coin that he dropped?

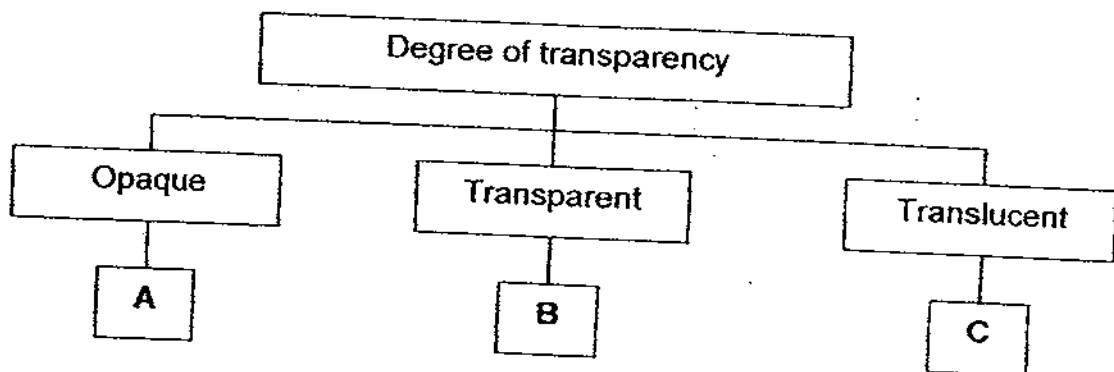
- (1) C only
- (2) A and C only
- (3) B and D only
- (4) A, C and D only

11. Which of the following statements are true?

- A: Moon is a source of light.
- B: We can see objects because they reflect light into our eyes.
- C: The smoother the surface of an object, the greater the amount of light it reflects.
- D: The greater the amount of light passes through a material, the darker the shadow cast.

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

12. Study the classification chart below.



Which one of the following correctly matches A, B and C?

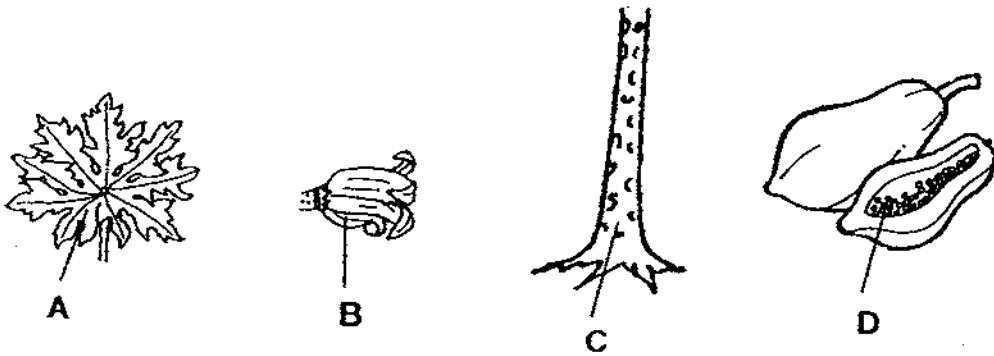
| | A | B | C |
|-----|-------------|-------------------|-------------------|
| (1) | Mirror | Glass bulb | Frosted glass |
| (2) | Windscreen | Clear plastic mug | Brick |
| (3) | Glass bulb | Mirror | Frosted glass |
| (4) | Steel ruler | Frosted glass | Clear plastic mug |

13. How does saliva help in digestion?

- A: It cuts and slices food into smaller pieces.
- B: It helps break down food into simpler substances.
- C: It moistens and softens food so that the food can be swallowed easily.

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

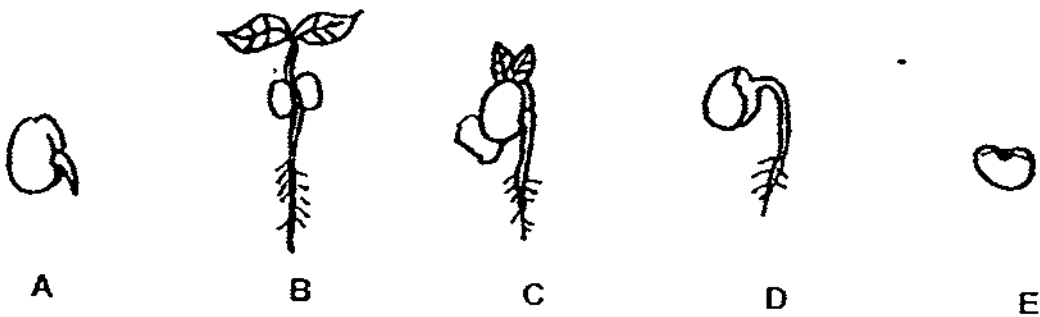
14. The diagrams below show the different parts of a papaya tree.



Which one of the following parts of the papaya tree will develop into a young plant?

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

15. Study the diagrams below carefully.



Which of the following correctly shows the stages of growth of a bean plant?

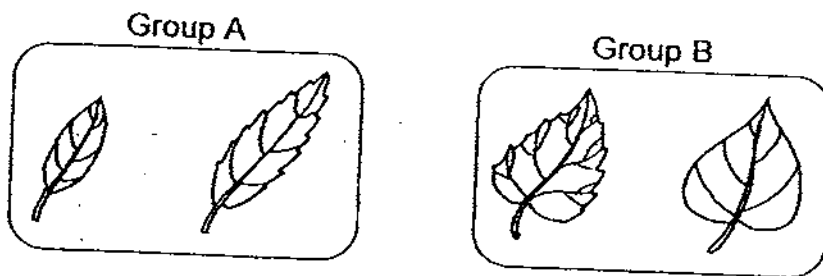
- (1) E → A → D → C → B
- (2) B → E → C → D → B
- (3) A → E → D → C → B
- (4) E → D → A → C → B

16. Which of the following statements about digestion are true?

- A: Food is broken down in the gullet after it is swallowed.
- B: The stomach digests the food with gastric juices.
- C: Water and minerals are mainly absorbed in the small intestine.
- D: Digestion is completed in the small intestine.

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

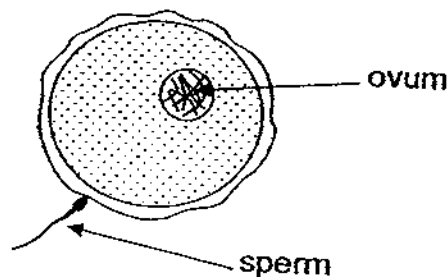
17. Some leaves are grouped into 2 groups A and B as shown in the diagrams below.



Which one of the following properties has been used to group the leaves?

- (1) Size
- (2) Shape
- (3) Leaf edge
- (4) Vein pattern

18. Study the diagram below.



What is the process shown in the diagram above?

- (1) Dispersal
- (2) Fertilisation
- (3) Germination
- (4) Pollination

19. Study the table below.

| Name | Eye colour | Hair colour | Earlobes |
|--------|------------|---------------|----------|
| Frank | Brown | Natural brown | Detached |
| Gloria | Blue | Natural blond | Attached |

Frank and Gloria is a married couple. Which one of the following characteristics **cannot** be found in their offsprings?

| | Eye colour | Hair colour | Earlobes |
|-----|------------|---------------|----------|
| (1) | Blue | Natural black | Detached |
| (2) | Brown | Natural blond | Attached |
| (3) | Blue | Natural blond | Attached |
| (4) | Brown | Natural brown | Detached |

20. Study the plants shown below.

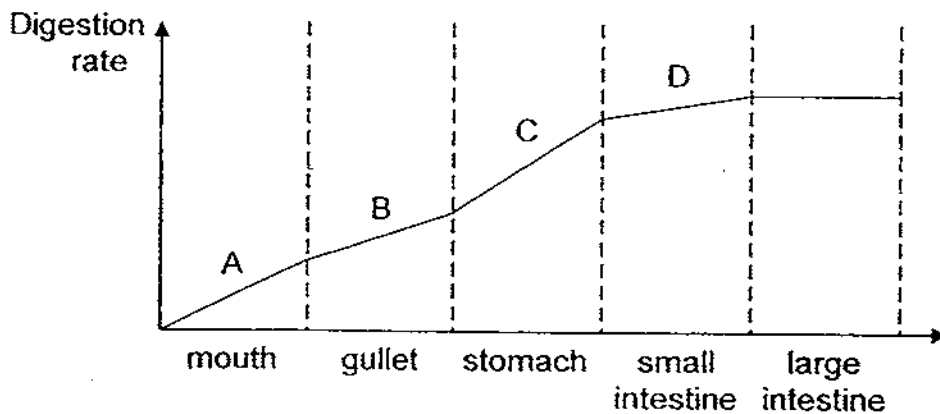


Based on the pictures above, which of the following statements are true?

- A: Both plants have strong stems.
- B: Both plants have heart-shaped leaves.
- C: Both plants have flowers that grow singly.
- D: Both plants have same vein pattern on their leaves.

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

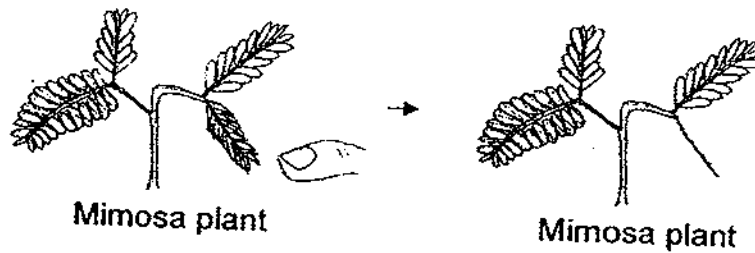
21. The graph below shows an average person's digestion rate at different parts of the digestive system over several hours.



Which one of the following parts of the graph is incorrectly drawn?

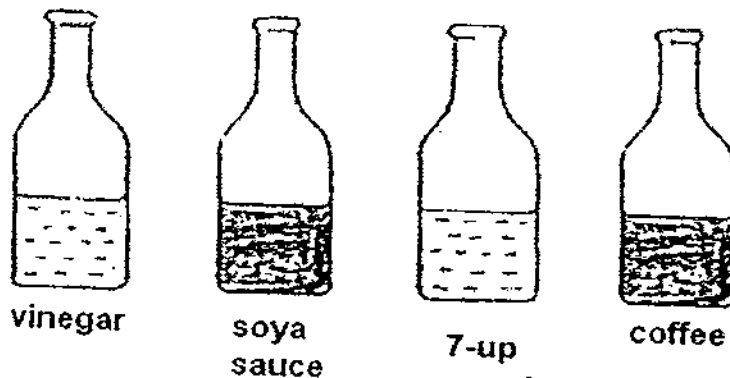
- (1) A
- (2) B
- (3) C
- (4) D

22. Jenny touched the leaves of a mimosa plant and observed a reaction from the leaves as shown in the diagram below.



Which one of the following statements correctly describes the reaction she observed?

- (1) Mimosa plant can die.
 - (2) Mimosa plant can move on its own.
 - (3) Mimosa plant can grow and develop.
 - (4) Mimosa plant can respond to a change in the surroundings.
23. Study the diagram below carefully.



Which two of the following senses can be use to correctly identify the liquids?

- A: Sense of sight
 - B: Sense of touch
 - C: Sense of taste
 - D: Sense of smell
- (1) A and B only
 - (2) A and C only
 - (3) B and D only
 - (4) C and D only

24. Allan is blindfolded before he is asked to differentiate some pairs of items.

- A: An empty can and a can filled with some beans in it.
- B: A cup of chocolate milk and a cup of plain water.
- C: A piece of wet cloth and a piece of dry cloth.
- D: A red pen and a blue pen.

Which of the following pairs of items can he differentiate?

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

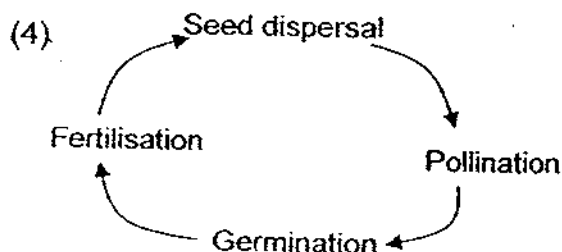
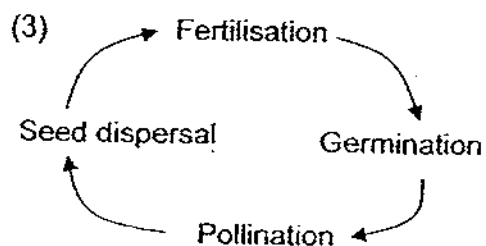
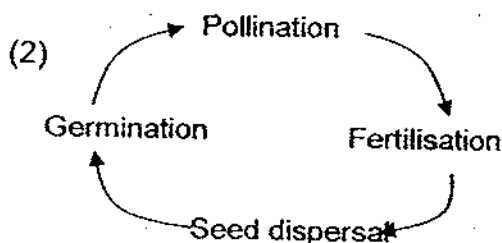
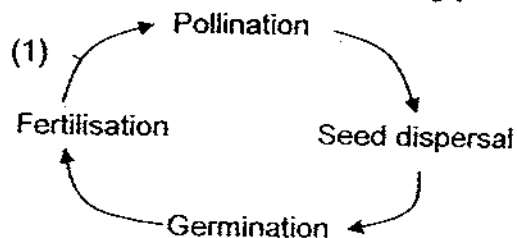
25. A group of pupils recorded in the table below the number of visits made by bees to 4 different flowering plants A, B, C and D in a garden during a period of one hour.

| Flowering Plants | Size of flower | Colour of flower | Scent of flower | Number of visits by bees |
|------------------|----------------|------------------|-----------------|--------------------------|
| A | Large | Yellow | No scent | 27 |
| B | Medium | White | Pleasant scent | 19 |
| C | Small | White | No scent | ? |
| D | Large | Red | Pleasant scent | 43 |

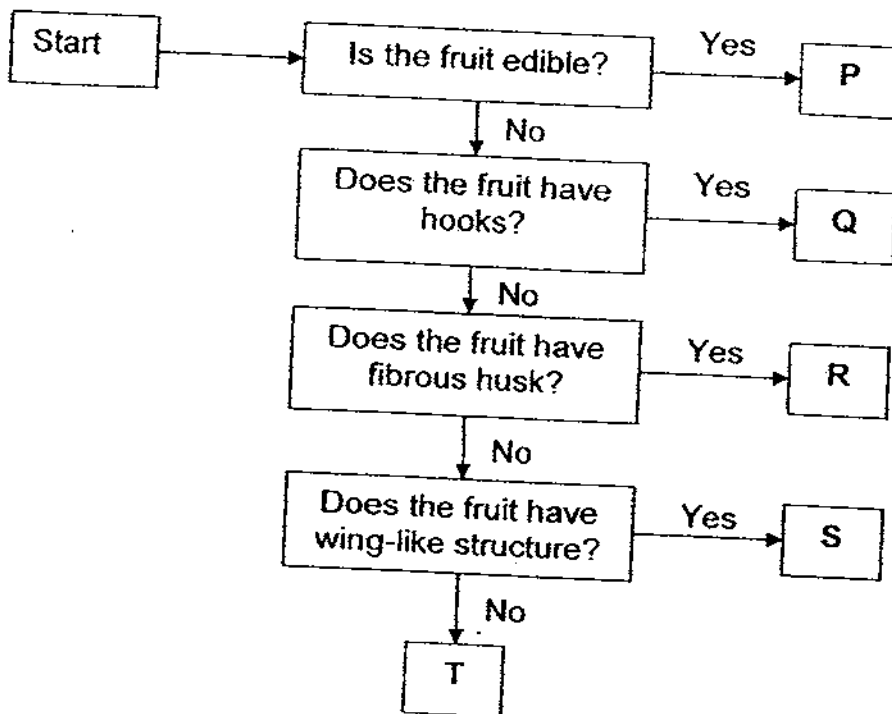
They had forgotten to record the number of visits made by bees to Plant C. What is the most likely possible number of visits made by bees to Plant C?

- (1) Fewer than 19
- (2) Between 19 and 27
- (3) Between 27 and 43
- (4) More than 43

26. Which one of the following shows the correct sequence of the processes in the sexual reproduction of flowering plants?



27. Study the flow chart below.



Which of the following fruits (P, Q, R, S or T) are dispersed by animals?

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

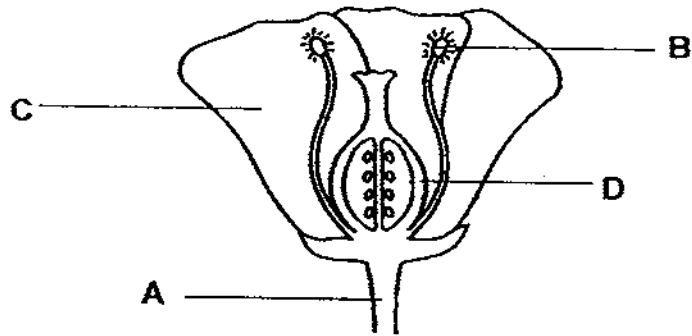
28. The table below shows the characteristics of four flowers A, B, C and D.

| Flower | Petal | | Smell |
|--------|-------|-------------------|----------|
| | Size | Colour | |
| A | Large | Brightly coloured | Scented |
| B | Small | Dull coloured | No scent |
| C | Large | Dull coloured | Scented |
| D | Small | Brightly coloured | Scented |

Sophie wanted to find out if insects are attracted to bright colours or dull colours. Which two flowers should she use for her experiment?

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

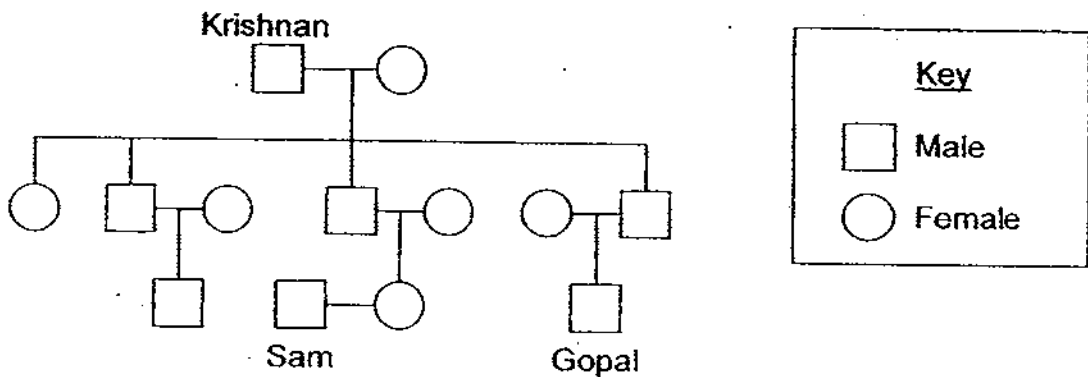
29. Study the cross-section of a flower.



Which one of the following parts is **incorrectly** matched to its function?

| | Part | Function |
|-----|------|------------------------------------|
| (1) | A | Support the flower upright |
| (2) | B | Produces seeds |
| (3) | C | Protects the insides of the flower |
| (4) | D | Develops into fruit |

30. Study the family tree below.



Which of the following statements are **correct**?

- A: Sam is the cousin of Gopal.
- B: Krishnan has three grandchildren.
- C: Gopal's ~~paternal~~ ^{maternal} grandfather is Krishnan.
- D: Krishnan has more sons than daughters.

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

END OF PART I



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Name : _____ ()

Class : Pr 5 ()

Duration : 1 h 45 min (Parts I & II)

Date : 7 May 2009

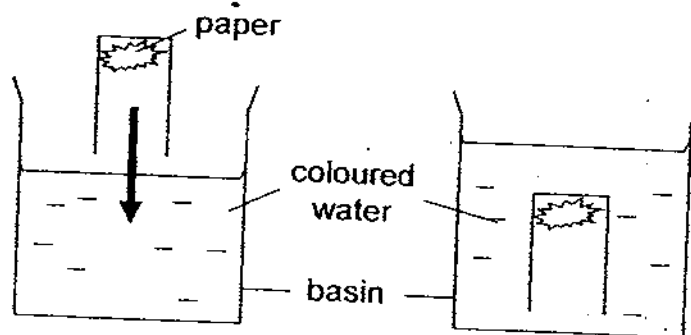
Parent's Signature : _____

| | |
|-------------------------|--|
| Part I (60 marks) | |
| Part II (40 marks) | |
| SA1 (100 marks) | |

Part II: (40 marks)

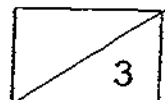
Write your answers to questions 31 to 44 in this script.

31. Nadya crushed a piece of paper and pushed it to the bottom of a drinking glass before placing the inverted glass into a basin of coloured water as shown in the diagram below.

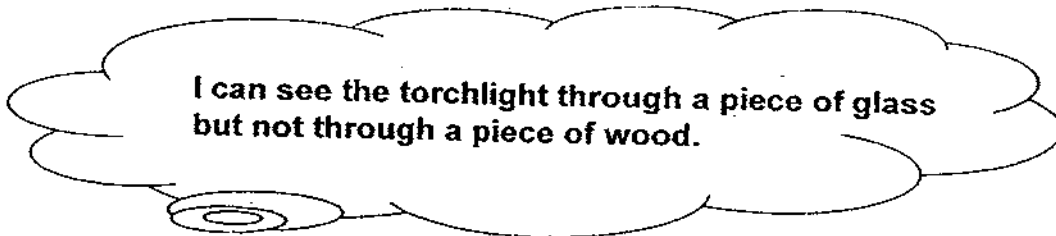


- (a) What happened to the paper when the glass is inverted into the water? [1]

- (b) Explain why the water level in the basin rose when Nadya placed the inverted glass into the basin of coloured water. [2]



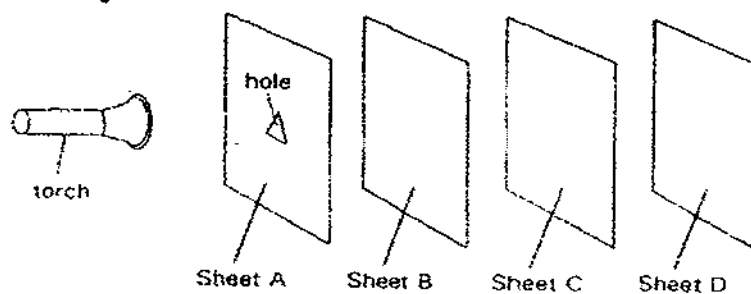
32. Peter conducted an experiment about light using torchlight, a piece of wood and a piece of glass. He made the following statement after the experiment.



- (a) Give a reason for Peter's statement.

[1]

- (b) Peter then conducted another experiment shown below in a dark room. Sheets A, B, C and D are arranged in a straight line. When the torch is switched on, a bright triangular patch of light is seen on **Sheet D** only.



- (i) The table below shows two headings to group Sheets A, B, C and D.

Complete the table by putting the letters 'A', 'B', 'C' and 'D' under the correct heading.

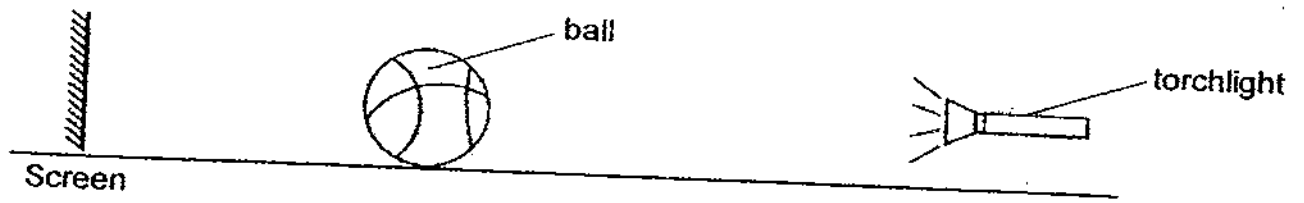
[2]

| Allow light to pass through | Does not allow light to pass through |
|-----------------------------|--------------------------------------|
| | |

- (ii) If the torch is brought nearer to sheet A, what possibly changes will be observed for the triangular patch of light on sheet D?

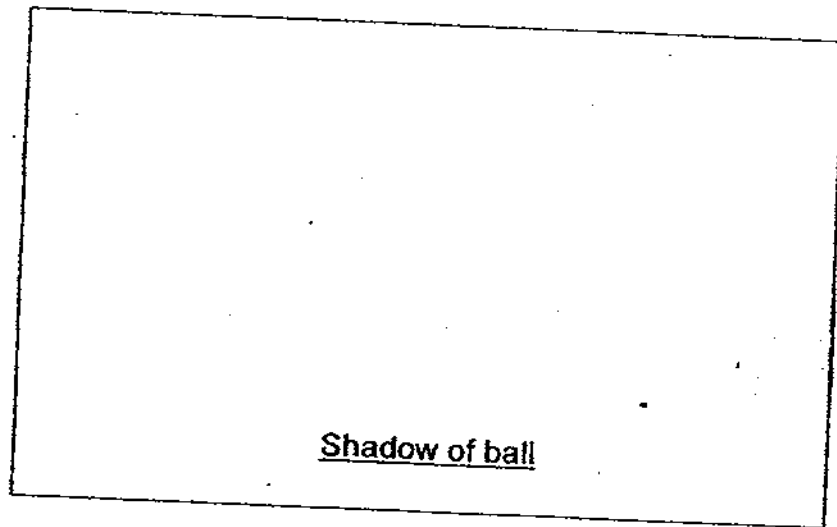
[1]

33. Siti uses a torchlight and shines it on a ball as shown in the diagram below.



(a) Draw the shadow of the ball that she will see on the screen in the box below.

[1]

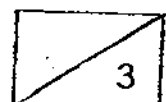


(b) State two possible ways of making the shadow of the ball bigger.

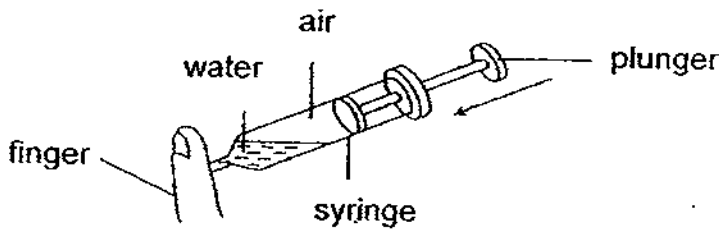
[2]

(i)

(ii)



34. The diagram below shows a syringe filled with air and water.



(a) Which of the following will happen when the plunger is pushed in?
Put a tick (✓) under the correct headings in the table below.

[2]

| | Increases | Decreases | Remains the same |
|-----------------|-----------|-----------|------------------|
| Volume of air | | | |
| Volume of water | | | |

(b) Compare and state the one difference in the property of air and water as shown in this experiment.

[1]

35. Jeremy conducted an experiment to investigate how the two types of pollutants (liquid detergent and bleach) affected the growth of some water plants, duckweeds. He filled 3 similar containers P, Q and R with tap water and then added 50 duckweeds into each of them. He added liquid detergent into container Q and added bleach into container R as shown in the table below. Container P acts as a control. He then left the 3 containers near a window and recorded the number of duckweeds left after one week.

(a) Complete the table below with the correct amount of tap water and pollutants to be used to ensure a fair test.

[2]

| Container | P | Q | R |
|---------------------------|-------|------|------|
| Amount of tap water (ml) | (i) | 100 | (ii) |
| Amount of pollutants (ml) | (iii) | (iv) | 50 |
| Number of duckweeds left | 55 | 45 | 20 |

(b) Why is there an increase in the number of duckweeds for container P?

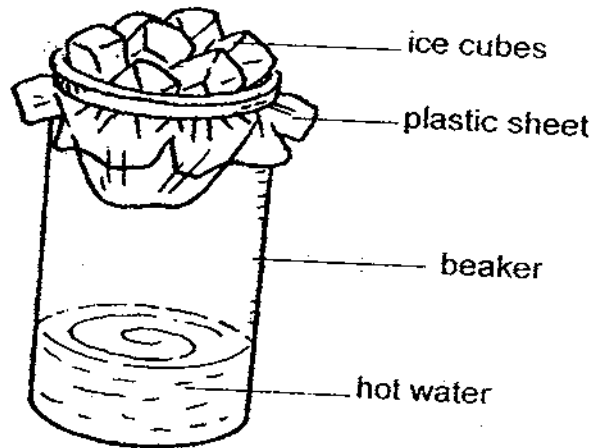
[1]

(c) Compare between container Q and R, what can you conclude from the experiment above?

[1]

7

36. In order to demonstrate the formation of rain, Helen prepares the set-up as shown below.



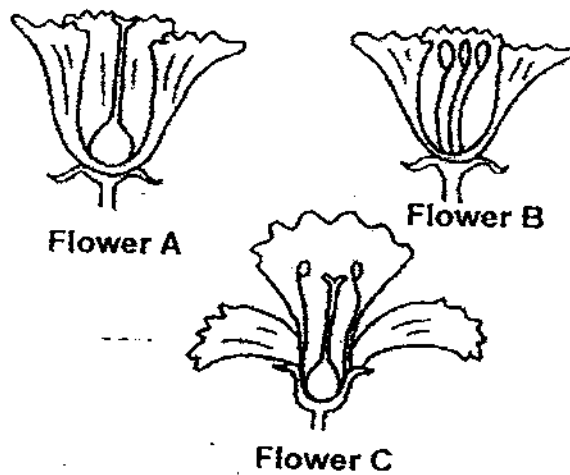
(a) What can be observed in the set-up shortly? [1]

(b) What process(es) is/are taking place in the set-up to explain what is observed in (a)? [1]

37. (a) How does an oil spill affect the animals and plants living in the water? [1]

(b) Besides oil spills, state another cause of water pollution. [1]

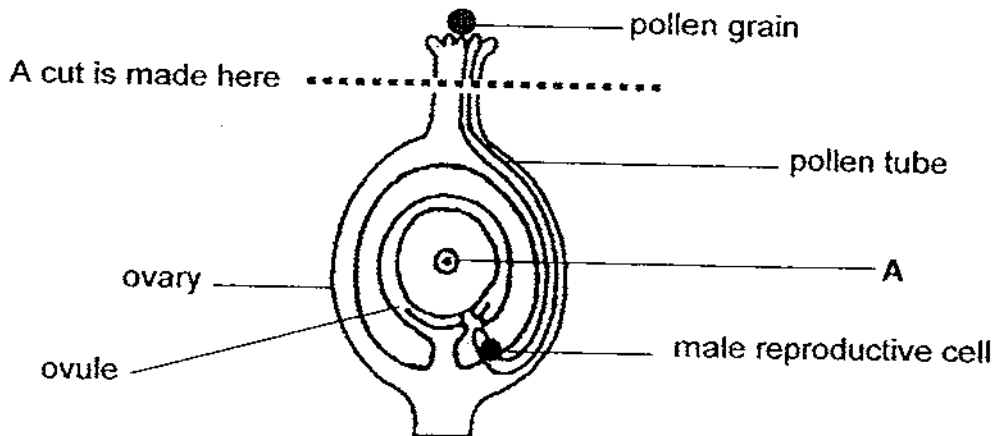
38. The diagrams below show the cross-sections of flowers A, B and C.



(a) Which one of the above flower/ (s) can **never** develop into a fruit? [1]

(b) Give a reason for your answer in (a). [2]

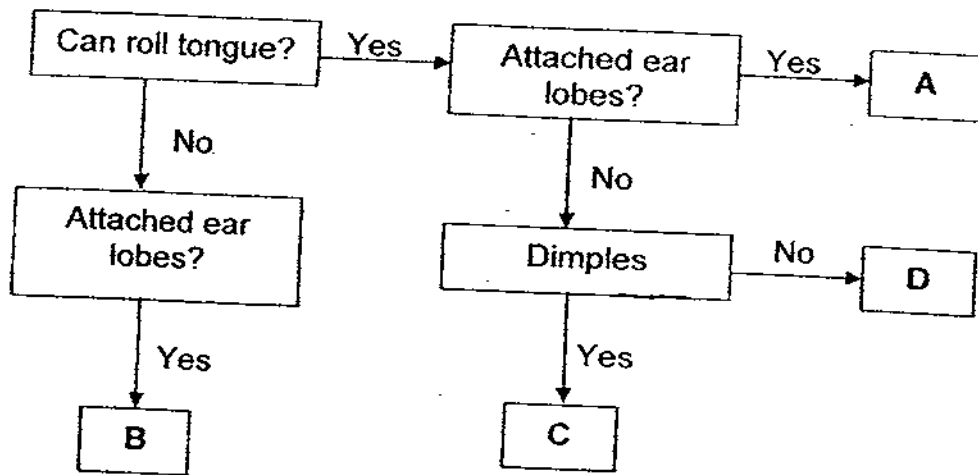
39. The diagram below shows the female part of the flower.



(a) Identify the part marked A. [1]

(b) A cut is made on the female part of the flower as shown in the diagram above. Will the ovary be able to develop into a fruit? Explain your answer. [2]

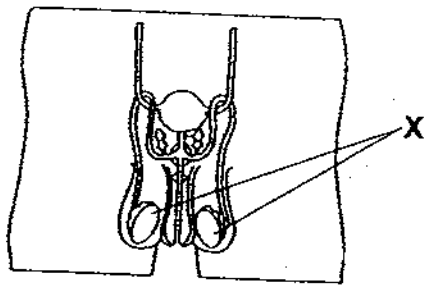
40. Study the flow chart below.



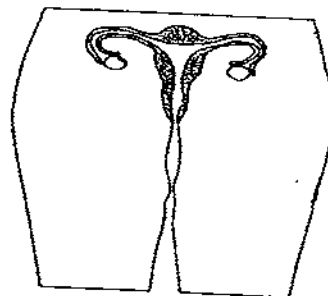
(a) Jane has dimples but no attached ear lobes. She can roll her tongue like her father. Which letter (A, B, C or D) represents her? [1]

(b) Describe all the characteristics of D. [1]

41. The diagram below shows the human male and female reproductive systems.



Male reproductive system



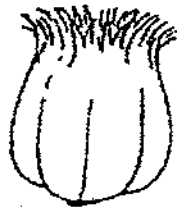
Female reproductive system

(a) What is part X known as? [1]

(b) What is the function of part X? [1]

(c) LABEL and MARK the ovary in the female reproductive system it as "Y" in the diagram above. [1]

42. Study the diagram of Fruit Q shown below. Jenny wants to find out if fruit Q is dispersed the same way as the pong pong fruit.



Fruit Q

State **two** methods where she can show that Fruit Q is dispersed the same way as the pong pong fruit. [2]

- (i) _____

- (ii) _____

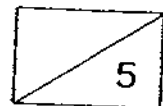
43. Clement and Matthew describe that a durian has the following characteristics: strong smell, sweet flesh, thorny and green skin.

(a) State the **sense organs** that allow Clement to observe these characteristics of the durian. [2]

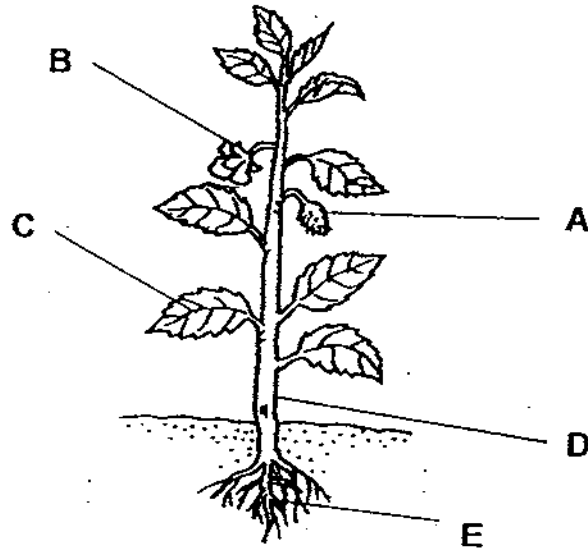
- (i) Strong smell: _____
- (ii) Sweet flesh: _____
- (iii) Thorny skin: _____
- (iv) Green skin: _____

(b) Matthew opened the durian fruit and observed that durian seed is covered with white sticky flesh.

Which **senses** allow him to make the observations? [1]



44. The diagram below shows a plant with parts labeled A to E.



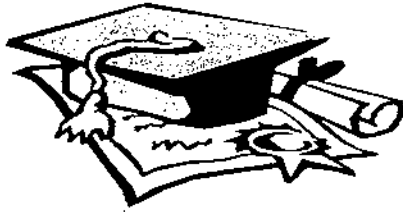
(a) Complete the table by writing the letters A, B, C, D or E to identify the correct parts of the plant to its function.

[2]

| | Function | Part of plant |
|------|--|---------------|
| (i) | It supports the plant. | |
| (ii) | It contains seeds, which can grow into young plants. | |

(b) What happens if part E is missing?

[1]



ANSWER SHEET

EXAM PAPER 2009

SCHOOL : MAHABODHI PRIMARY SCHOOL
SUBJECT : PRIMARY 5 SCIENCE

TERM : SA 1

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

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


31)a) Paper will still remain dry.

b) The drinking glass and the air inside it occupy space.

32)a) A glass is transparent while a piece of wood is opaque.

b)i) B, C A, D

ii) Brighter.

33)a) 

b)i) Take the torch light and put it nearer to the ball.

ii) Take the ball and put it nearer to the torchlight.

34)a) Decreases

Remains the same

b) Air can be compressed but water cannot.

35)a) i) 100 ii) 100 iii) 0 iv) 50

b) Container P's water is pure and so the duckweeds are able to grow and reproduce.

c) Bleach is more poisoning than liquid detergent.

36)a)Water droplets in the inner surface of the beaker.
b)Evaporation and condensation.

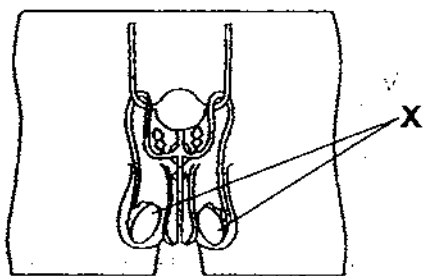
37)a)The water plants will not be able to photosynthesis and it will end up dying and so the herbivorous fisher have nothing to eat and will also eng up dying.
b)Wastes been thrown into the lakes or river.

38)a)Flower B.
b)Flower B does not have the female part while Flower A and C have.

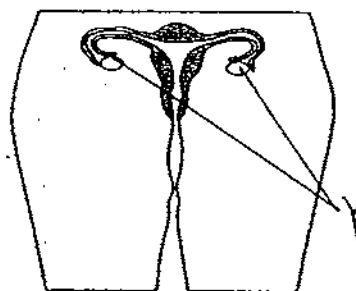
39)a)Ovum.
b)Yes it will be able to mule reproductive cell will be able to fuse with the female reproductive cell.

40)a)C.
b)D can roll it's tongue has no attached ear lobes and has no dimples.

41)a)Testes.
b)It produces sperms.
c)



Male reproductive system



Female reproductive system

42)i)She can check if fruit Q has fibrous husk.
ii)She can try to put fruit Q in a basin of water and see if fruit Q floats or not.

43)a)i)nose ii)tougue iii)skin and eyes iv)eyes
b)Sense of touch and sight.

44)a)i)D ii)A
b)The plant cannot water and mineral salts.

