

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887



PRIMARY 3 MID-YEAR EXAMINATION 2009 SCIENCE BOOKLET A

Total Time : 1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

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

Name: _____ ()

Class: Primary 3. _____

Date: 8 May 2009

| | |
|--------------|--------------|
| Booklet A | / 60 |
| Booklet B | / 40 |
| TOTAL | / 100 |

This booklet consists of 13 printed pages.

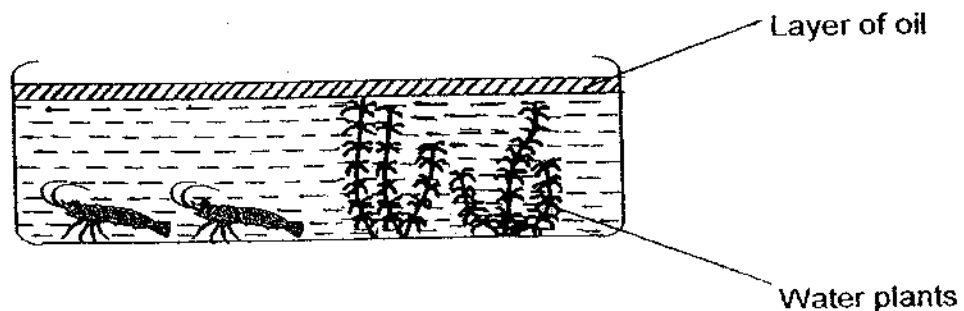
Section A : (30 x 2 marks)

For each question, four options are given. Choose the most suitable option and shade your answer in the Optical Answer Sheet (OAS) provided.

1. A beetle flies near to a Venus flytrap and it closes its leaves immediately. This shows that a plant is a living thing and it can _____.

- (1) grow
- (2) reproduce
- (3) die eventually
- (4) move by itself

2. Jane set up an experiment in the shade as shown below. What will happen to the prawns after 10 days?



- (1) They will die.
- (2) They will grow bigger in size.
- (3) They will reproduce by laying eggs.
- (4) Nothing will happen to the prawns.

3. Which of the following/s would fungi feed on?

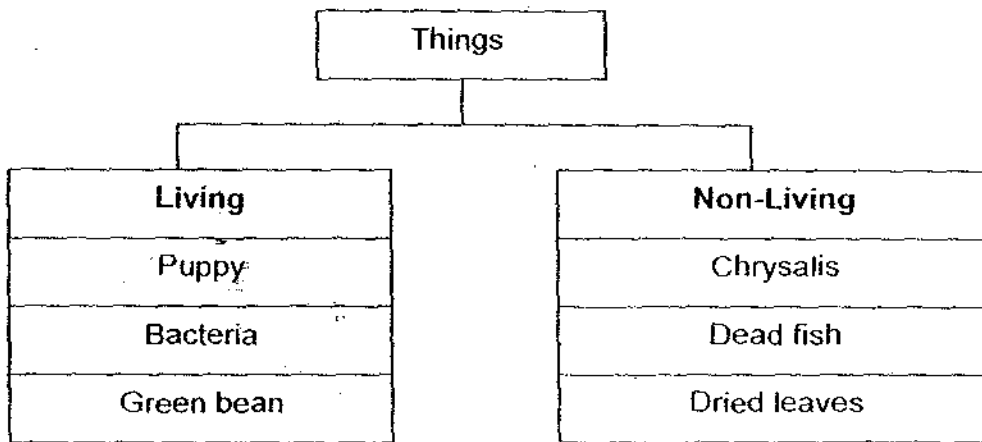
- A: Bread
- B: Oranges
- C: Wooden log
- D: Leather bag

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

4. Which one of the following statements on micro-organisms is true?

- ① All micro-organisms are harmful to people.
- ② Micro-organisms reproduce by producing spores.
- ③ Micro-organisms can be seen with the naked eye.
- ④ Yeast is a type of micro-organism though it is also a fungi.

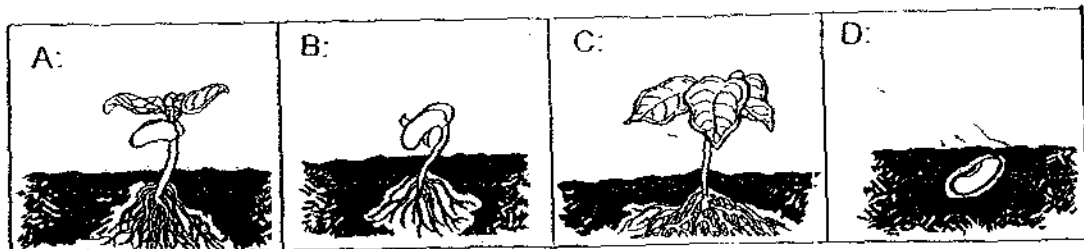
5. Study the classification table below.



Which one of the following is wrongly grouped?

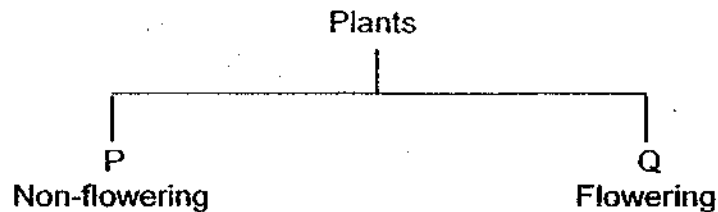
- ① Bacteria
- ② Chrysalis
- ③ Green bean
- ④ Dried leaves

6. The picture shows the different stages in the growth of a bean. What is the correct order of growth, beginning with D.



- D, B, A, C
- D, A, C, B
- D, B, C, A
- D, A, B, C

7.



Which one of the following statements is true for both Plants P and Q?

- (1) They can photosynthesize.
- (2) They reproduce from seeds.
- (3) They do not reproduce from spores.
- (4) They are plants that grow on other plants.

8. Study the characteristics of A, B, C and D below.

| | Has legs | Needs air | Reproduces | Able to move from place to place |
|---|----------|-----------|------------|----------------------------------|
| A | √ | √ | √ | |
| B | √ | | | |
| C | | | | √ |
| D | | √ | √ | |

Which of the following is most likely a living thing?

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

9. Which statement/s below is/are incorrect?

- A. Fungi make their own food as they contain chlorophyll.
- B. Bread mould reproduces by producing spores.
- C. Mushroom is a type of non-flowering plant.
- D. Toadstool is a poisonous plant.

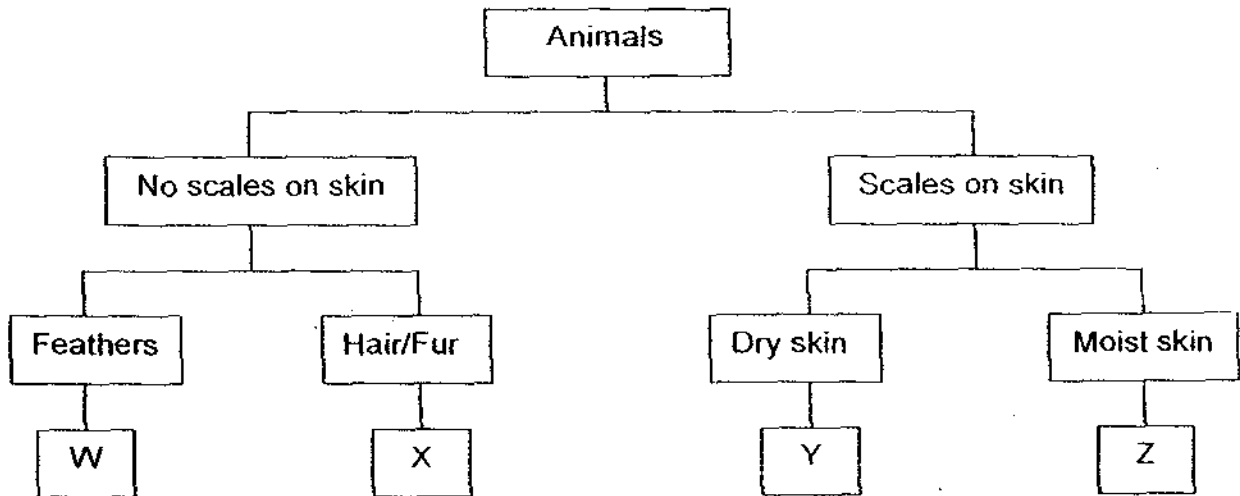
- (1) B only
- (2) A and D only
- (3) B and C only
- (4) A, C and D only

10. It is known that different animals produce different number of young or eggs each time. Study the table below and infer which animals are more likely to take care of their young?

| Animals | Number of young or eggs produced each time |
|---------|--|
| P | 5 eggs |
| Q | 100 eggs |
| R | 1 young |
| S | 4000 eggs |
| T | 3-8 young |

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

11. Study the classification chart below.



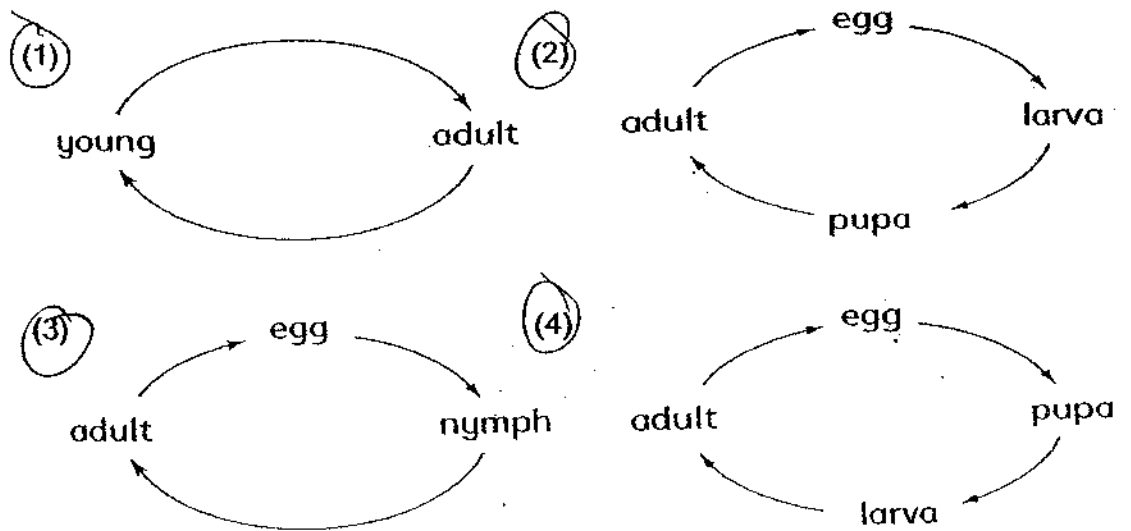
What animals do you think W, X, Y and Z are?

| | W | X | Y | Z |
|-----|--------|------------|-------------|------------|
| (1) | Mynah | Donkey | Grasshopper | Kingfisher |
| (2) | Emu | Penguin | Tortoise | Frog |
| (3) | Parrot | Polar bear | Lizard | Molly |
| (4) | Bat | Whale | Snake | Shark |

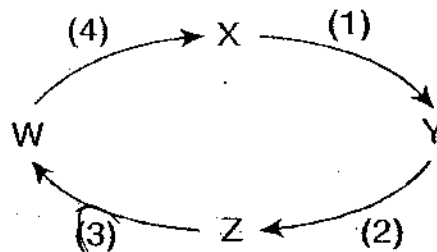
12. Which one of the following does not follow a cycle?

- (1) Day and night.
- (2) Seasonal changes.
- (3) Development of an egg into a hen.
- (4) Movement of clouds across the sky.

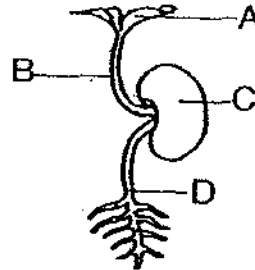
13. Which one of the following correctly shows the life cycle of a dragonfly?



14. The diagram below shows the life cycle of a mealworm beetle. If W represents the adult stage, at which stage does the process of moulting take place?



15. If the seed below has germinated under the right conditions, which part of the seedling was the first to grow?



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

16. The diagrams below show an adult plant and a young plant.



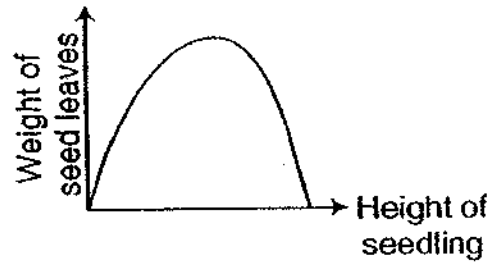
Which of the following can both the adult plant and the young plant do?

- A: Produce seeds.
- B: Make its own food.
- C: Absorb water through its roots.
- D: Absorb mineral salts from the ground.

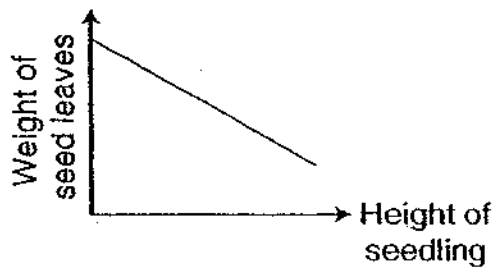
- (1) C only
- (2) A and C only
- (3) B and D only
- (4) B, C and D only

17. Which one of the following graphs below correctly shows the relationship between the weight of the seed leaves and the height of the seedling?

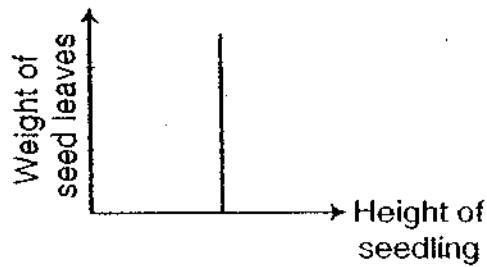
(1)



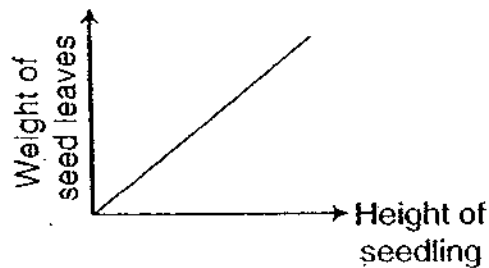
(2)



(3)



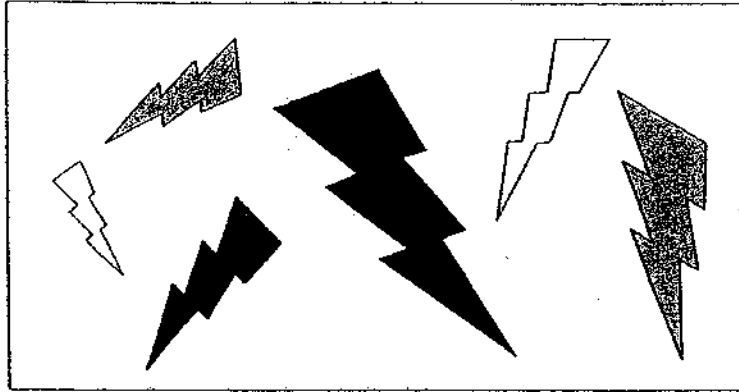
(4)



18. The mudskipper is a fish but is different from other fishes in that

- (1) it moves slower
- (2) it does not have gills
- (3) it can stay out of water
- (4) it breathes through its lungs

19. Study the way the objects have been classified below.



The objects have different _____ but have the same _____.

- (1) sizes; colour
- (2) shapes; size
- (3) number of sides; size
- (4) colours; number of sides

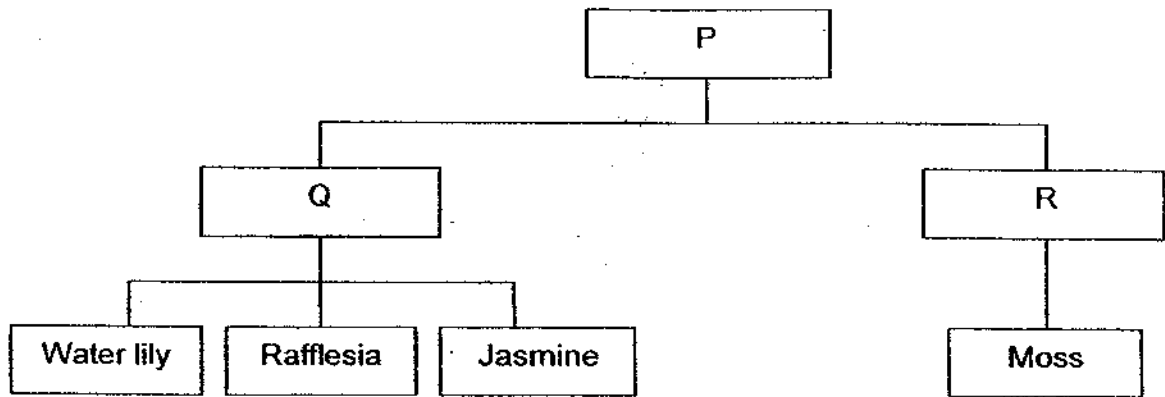
20. The table below shows the comparisons between the life cycles of a mosquito and a mealworm beetle.

| | | Mosquito | Mealworm beetle |
|---|--|----------|-----------------|
| A | Has a 4-stage life cycle? | √ | √ |
| B | Moult several times during its larval stage | √ | √ |
| C | Resembles its parent in many ways when young | X | √ |
| D | Feed on leaves when young | X | √ |

Which of the comparisons are correct?

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

21. Study the chart below.



What is the most appropriate heading for Q?

- (1) Water Plants
- (2) Flowering plants
- (3) Poisonous plants
- (4) Sweet-smelling plants

22. Hannah observed some birds as shown below.



She then drew the following conclusions.

- A: All the above birds have wings.
- B: All the above birds have a beak.
- C: All the above birds have feathers.
- D: All the above birds have webbed feet.

Which of her conclusions are correct?

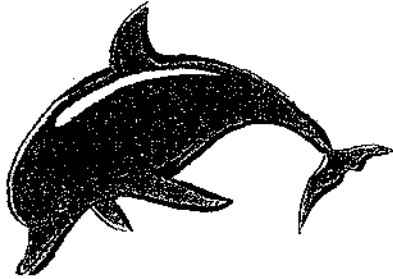
- (1) C only
- (2) B and C only
- (3) B, C and D only
- (4) All of the above

23. Which of the following animals are not mammals?

A: Platypus



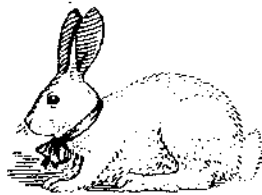
B: Dolphin



C: Bat



D: Rabbit



- (1) C only
- (2) A and B only
- (3) B and C only
- (4) None of the above

24. Study the classification table below.

| Group X | Group Y |
|-----------------------------|---------------------------|
| Guppy Swordtail Molly | Penguin Emu Ostrich |

How are the animals grouped?

| | Group X | Group Y |
|---|---------------------------|----------------------|
| A | Fishes | Birds |
| B | Have gills | Have breathing holes |
| C | Can swim | Can fly |
| D | Give birth to young alive | Lay eggs |

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

25. Observe the following animals.

A:



B:



C:



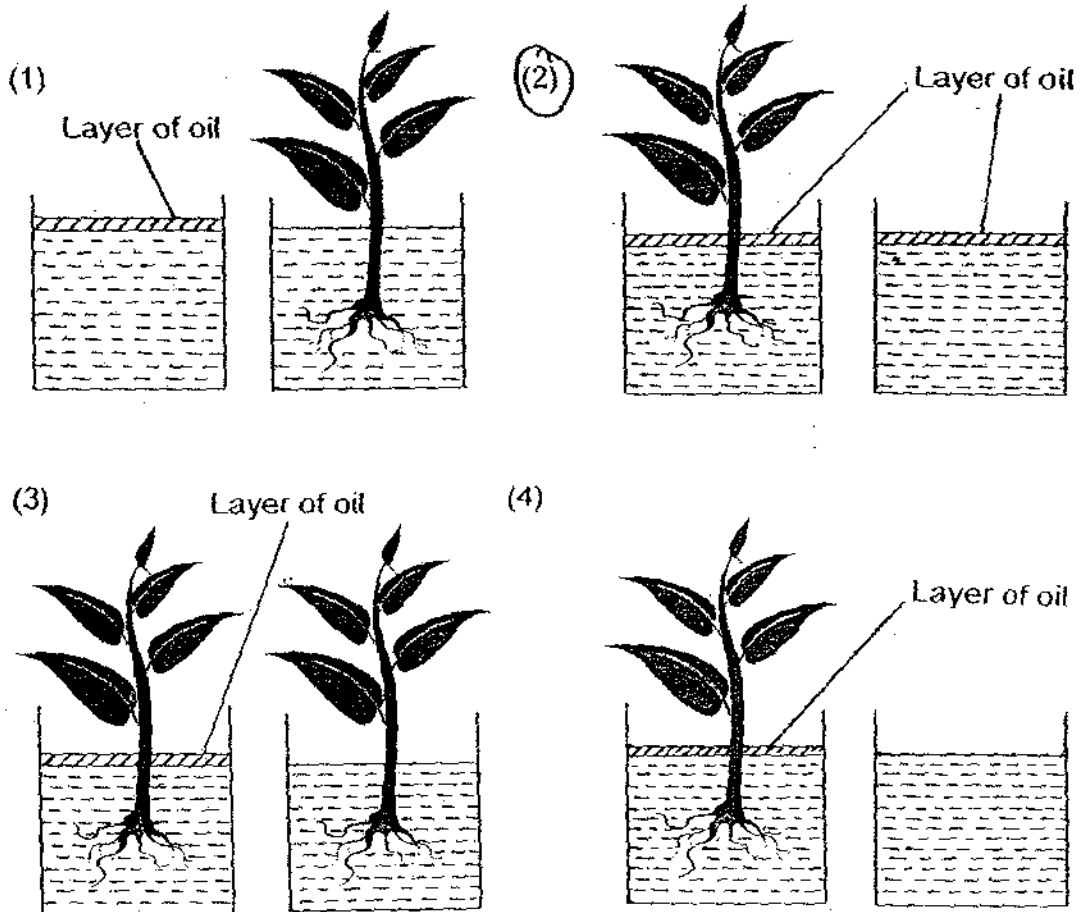
D:



Which of the above animals are insects?

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

26. Hashim wants to find out if plants absorb water. Which of the following pair of set-ups should he used so that his experiment is a fair one?



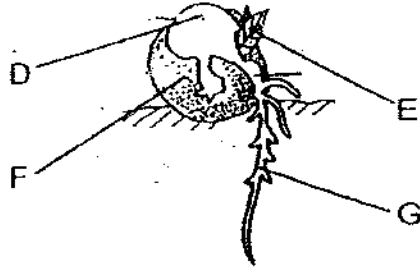
27. Which pair of animals has the same number of stages in their life cycle as the insect shown below?



Dragonfly

- (1) Goose and mosquito
 (2) Frog and grasshopper
 (3) Chicken and housefly
 (4) Butterfly and mealworm beetle

Use the diagram below to answer Questions 28 and 29.



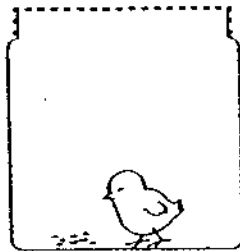
28. Which part provides food for the seedling during germination?

- (1) D
- (2) E
- (3) F
- (4) G

29. Which part protects the embryo and enables it to survive tough conditions?

- (1) D
- (2) E
- (3) F
- (4) G

30. Roshini put a chick in a container with tiny holes on the lid. She fed the chick with some grains everyday. After 3 days, the chick died.



Which of the following statements is/are true?

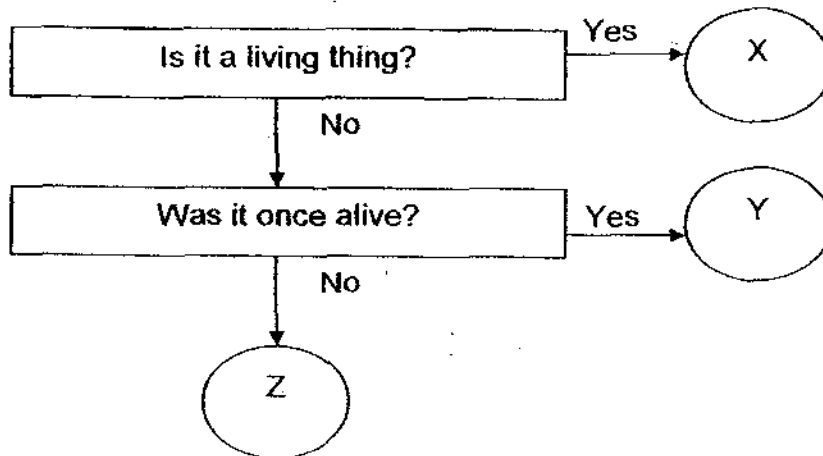
- ~~A~~: The chick missed the mother hen and died.
- ~~B~~: The chick died of thirst as water was not given.
- ~~C~~: The chick did not have air to breathe and cannot survive.
- ~~D~~: The chick did not have enough sunlight to keep itself warm.

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

Section B : (40 marks)

Write the answers in the blanks provided.

31. Study the flow chart below.



In the columns X, Y and Z, fill in the items listed in the box below.

| | | |
|---------|----------------|----------------|
| Giraffe | Cotton t-shirt | Leather jacket |
| Pen | Love grass | Clock |

| X | Y | Z |
|---|---|---|
| | | |
| | | |

(3 marks)

(a) Based on the flowchart, state one way in which Y was similar to X in the past. (1 mark)

(b) Based on the flowchart, state one way in which Y is similar to Z now. (1 mark)

METHODIST GIRLS' SCHOOL (PRIMARY)

Founded in 1887



PRIMARY 3 MID-YEAR EXAMINATION 2009 SCIENCE BOOKLET B

Total Time : 1 hour 30 minutes

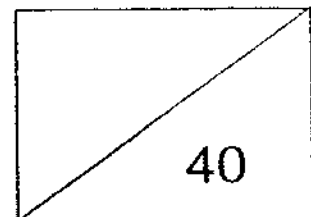
INSTRUCTIONS TO CANDIDATES

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

Name: _____ ()

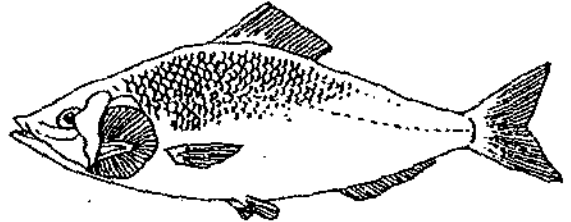
Class: Primary 3. _____

Date: 8 May 2009



This booklet consists of 11 printed pages.

32. The diagrams below show a mushroom and a fish.

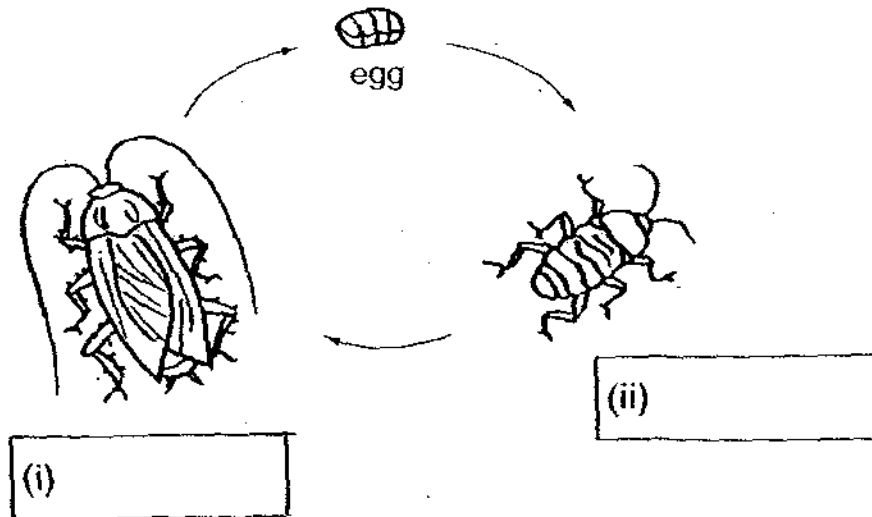


(a) Name one way in which the two organisms are similar? (Do not list the characteristics of living things) (1 mark)

(b) Name one way in which the two organisms are different? (1 mark)

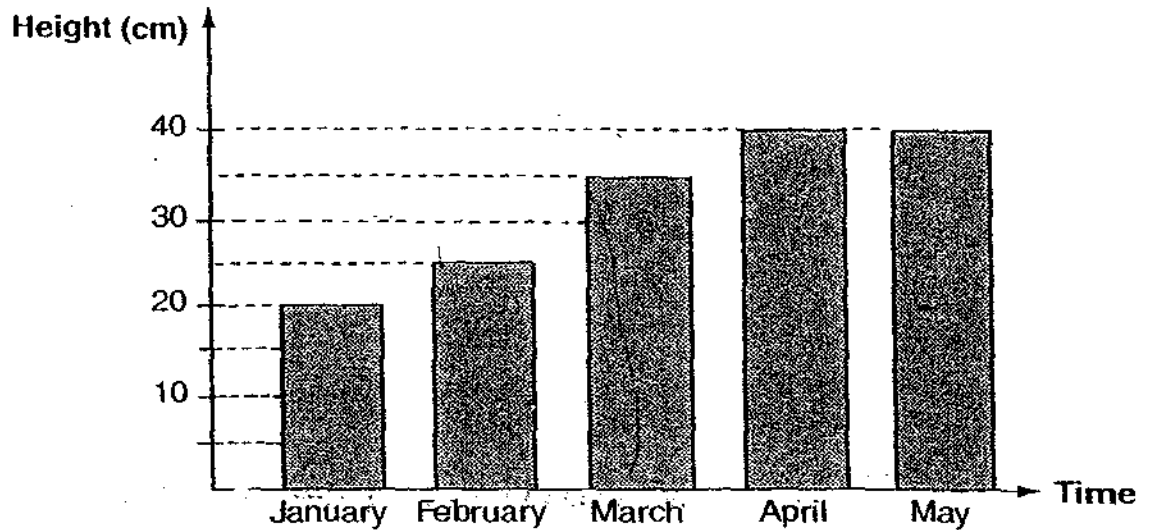
33. The diagram below shows the life cycle of a cockroach.

(a) Fill in the names of the stages in (i) and (ii) in the boxes below. (1 mark)



(b) List one difference between the cockroach at (i) and (ii)? (1 mark)

34. The graph below shows the height of a tomato plant over a period of time.



(a) What is the height of the tomato plant in March? (1 mark)

(b) The tomato plant grows the most between the month of _

and _____

(1 mark)

(c) What is the maximum height that the tomato plant can grow to?

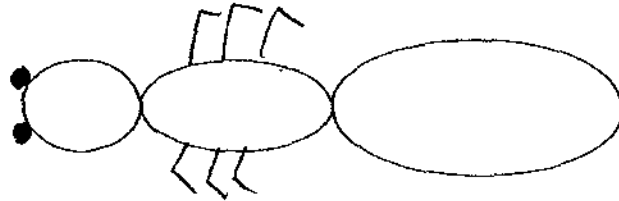
_____ (1 mark)

(d) Besides reproducing by seeds, name one other way plants are able to reproduce.

_____ (1 mark)

35. The picture below shows the body of an insect.

(a) Draw the legs on the part that are found jointed to the body. (1 mark)



(b) Name the part where the legs are jointed to the body.

_____ (1 mark)

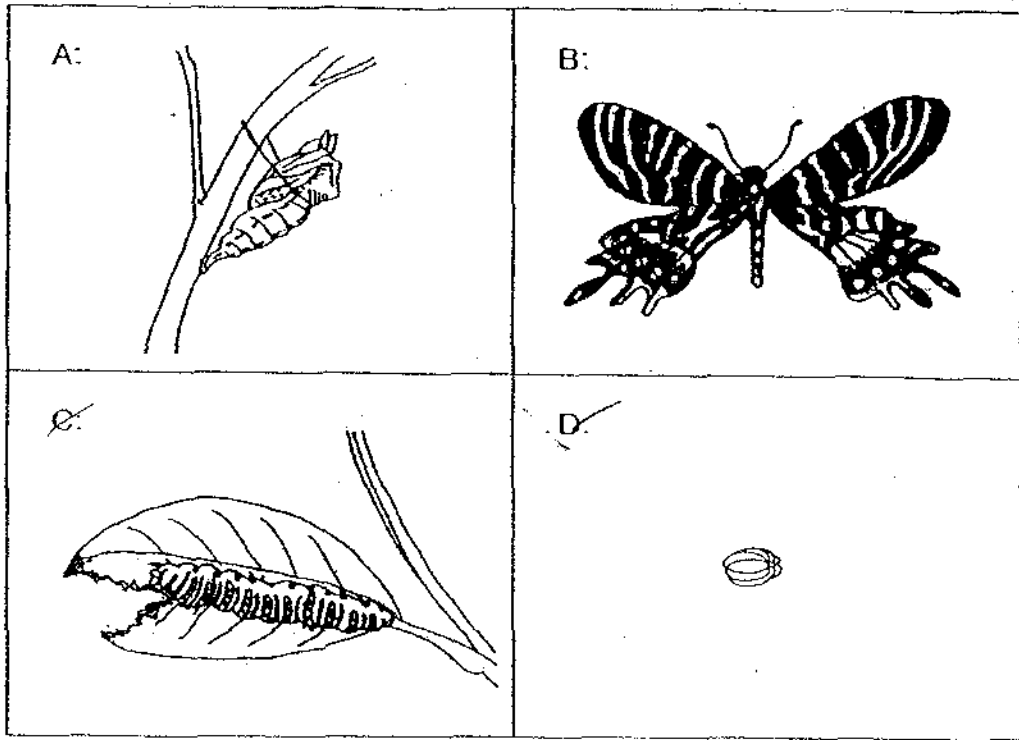
36. Jason planted two green beans X and Y. He recorded his observations of their growth in the table as shown below.

| Date | Green bean X | Green bean Y |
|--------|----------------------|-----------------------|
| 1 June | Bean planted | Bean planted |
| 3 June | Roots appeared | No change in the bean |
| 5 June | First shoot appeared | No change in the bean |
| 8 June | Leaves appeared | No change in the bean |

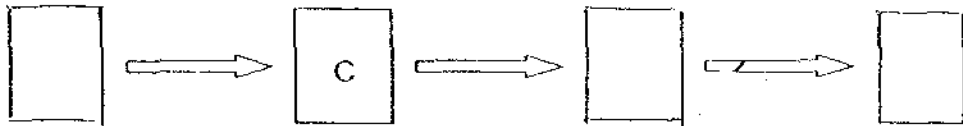
(a) Using the information above, on which date did germination begin for Green bean X? (1 mark)

(b) Suggest a reason why there was no change in Green bean Y. (1 mark)

37. The following pictures show the different stages in the life cycle of a butterfly.



(a) Arrange the pictures in the correct order in the boxes provided. (1 mark)



(b) i) Write the name of the stage in the life cycle of the butterfly when it is considered a pest?

_____ (1 mark)

(b) ii) Why is the butterfly considered a pest at the stage stated in (b) i)?

 _____ (1 mark)

38. Study the following list of animals.

| | | |
|----------|----------|-----------|
| Mosquito | Chicken | Sparrow |
| Eagle | Ladybird | Dragonfly |

Ahmad and Siva classify the animals differently in the following ways as shown below.

Ahmad:

| Group A | Group B |
|-----------|---------|
| Mosquito | Chicken |
| Ladybird | Sparrow |
| Dragonfly | Eagle |

Siva:

| Group X | Group Y |
|----------|-----------|
| Mosquito | Chicken |
| Ladybird | Sparrow |
| | Eagle |
| | Dragonfly |

(a) In which group will Ahmad classify a fruit fly? Explain your answer.

(1 mark)

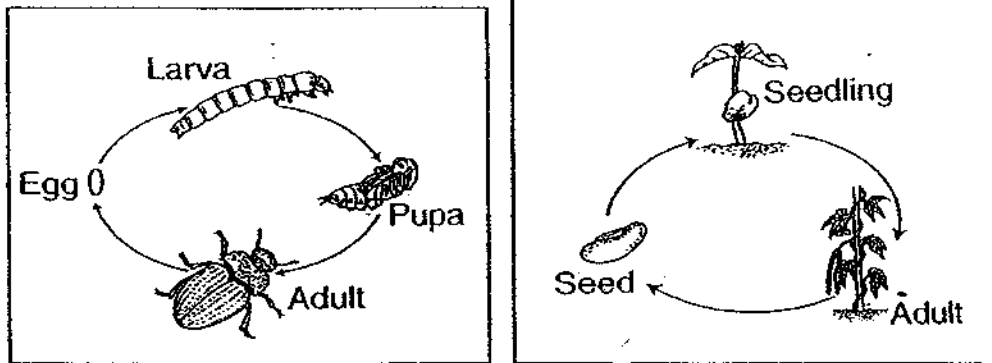
(b) In which group will Siva classify a toad? Explain your answer.

(1 mark)

39. Read the following sentences and write 'T' for a true statement and 'F' for a false statement in the box provided. (2 marks)

| | |
|---|--|
| All fungi can make their own food unlike bacteria. | |
| Proper hygiene helps to eliminate the growth of bacteria. | |
| All bacteria are harmful to our body as they cause diseases. | |
| Yeast are micro-organisms which are useful in the brewing of beer or making of bread. | |

40. The diagrams below show the life cycles of an animal and a plant.



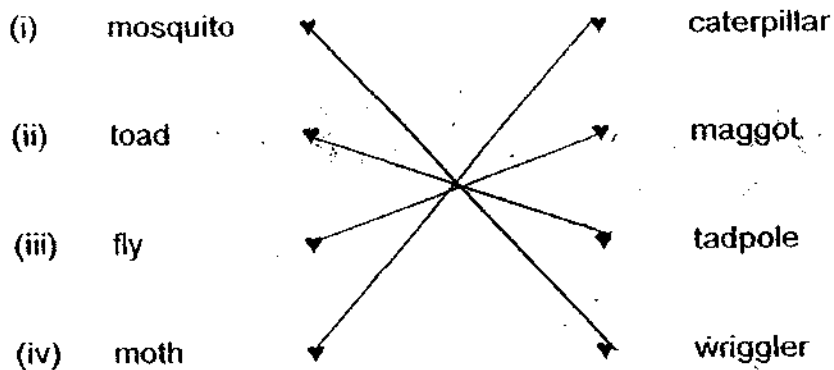
(a) How do the above life cycles of animal and plant differ from each other?

(1 mark)

(b) How are the above life cycles of animals and plant similar?

(1 mark)

41. (a) Match the following animals with their young. (2 marks)



(b) Name one young animal that looks like its parents. (1 mark)

42. Kemmy had 4 pots of similar young plants which she placed under the sun. She watered the plants daily but with different amounts of water. The table below records her observation after 5 days.



| Plant | Amount of water given daily | Observation after 5 days |
|-------|-----------------------------|--------------------------|
| W | 750 ml | Drooping |
| X | 500 ml | Grows poorly |
| Y | 250 ml | Grows well |
| Z | 0 ml | Withered and dried up |

- (a) What could have caused Plant W to droop?

_____ (1 mark)

- (b) What could have caused Plant Z to wither and dry up?

_____ (1 mark)

43. The pictures below show a panda and a tuna.



- (a) Name the organ that allows each of these animals to breathe. (1 mark)

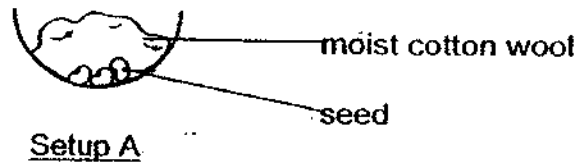
Panda: _____ Tuna: _____

- (b) What do these animals have on their bodies for protection? (1 mark)

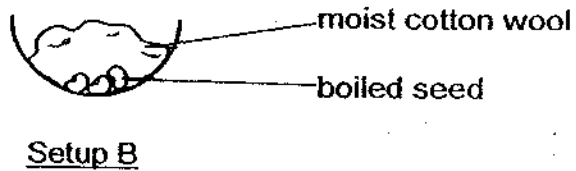
Panda: _____ Tuna: _____

44. Four setups containing seeds were kept at room temperature in a science laboratory.

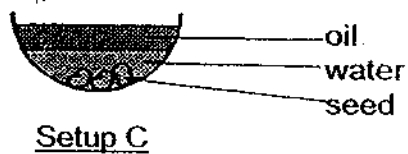
A:



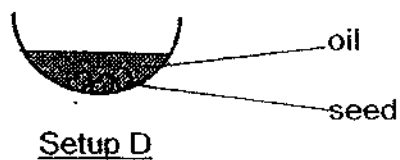
B:



C:



D:



(a) In which setup will the seeds germinate.

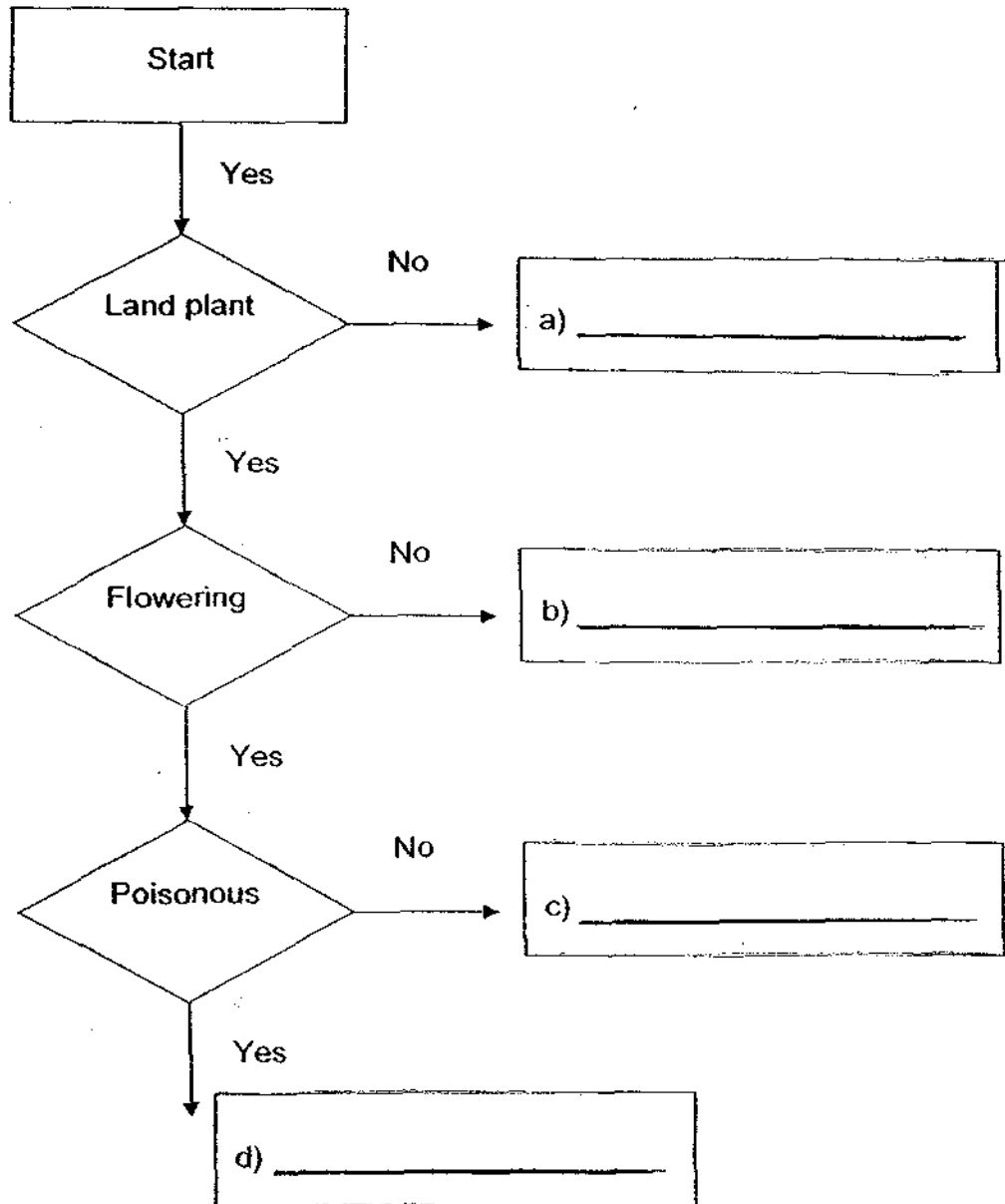
(1 mark)

(b) State the conditions necessary for seeds to germinate.

(1 mark)

45. Study the flow chart below and fill in the blanks using the words given in the box. (2 marks)

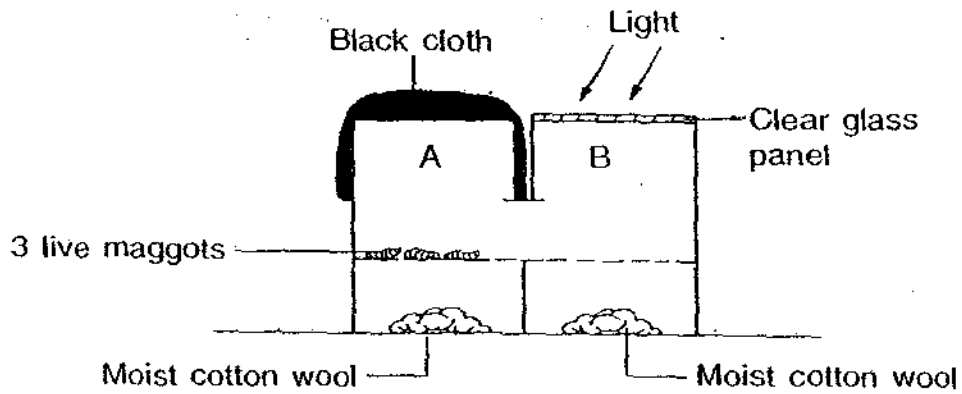
Allamanda Hydrilla Orchid Staghorn fern



(a) Name one plant, that has flowers that grow singly.

(1 mark)

46. Lulu conducted an experiment to see if animals respond to changes around them. She placed 3 live maggots into the set-up as shown below. The sides of the set-up did not allow light to pass through except from the top.



She covered Part A with a black cloth and shone a bright light through the clear glass panel in Part B. After 1 hour, she noticed that all 3 maggots were found in Part A of the set-up only.

- (a) Based on the experiment, what kind of environment do you think the maggots like?

(1 mark)

- (b) Do you think that Lulu has carried out the experiment fairly? Explain your answer.

(1 mark)

End of paper
Have you checked your work?

ANSWER SHEET

EXAM PAPER 2009

**SCHOOL : M G S PRIMARY
SUBJECT : PRIMARY 3 SCIENCE**

TERM : SA1

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

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

31)X: Giraffe, Love grass

Y: Cotton t-shirt, Leather jacket

Z: Pen, Clock

- a) They was once a living thing like.
b) They are not living things.

32)a)Both cannot make their own food.

b)Mushrooms are found on land whereas fishes are found in sea water.

33)a)i)Adult ii)Nymph

b)The nymph is smaller than the adult.

34)a)35cm b)February and March c)40cm d)By spores.

35)a) 

b)Thorax.

36)a)3 June.

b)Green bean Y is fake.

37)a)D→C→A→B

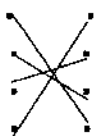
b)Larval stage.

c)The caterpillar eats lots of plants' leaves.

- 38)a)Group A, because a fruit fly is an insect.
b)Group Y, because it has a 3-stage not very big.

39)F T F T

- 40)a)The life cycle of an insect has 4-stage life cycle, but a plant has a 3-stage life cycle.
b)They both have an adult stage.

- 41)a)  b)Kitten

- 42)a)Too much water. b)No water.

- 43)a)Panda: Lungs Tuna: Gills
b)Panda: Hair Tuna: Scales

- 44)a)Set up A will germinate.
b)Water, air, warmth.

- 45)a)Hydrilla b)Staghorn fern c)Orchid d)Allamanda
a) Orchid.

- 46)a)The maggots like dark and moist places.
b)Yes. All variables were kept constant except one variable which was the light source.