

**Primary Six
Science
Semestral Assessment One**

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) and write it in the box provided. (60 MARKS)

1. Which one of the following is not required in the photosynthesis of plants?

- (1) Carbon dioxide
- (2) Oxygen
- (3) Sunlight
- (4) Water

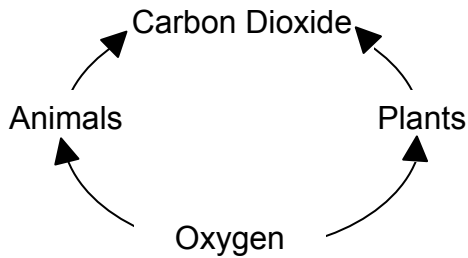
2. Which one of the following statement is correct?

- (1) There are more stomata on the upper surface of a leaf than the lower surface.
- (2) There are more stomata on the lower surface of a leaf than the upper surface.
- (3) Stomata can only be found on the upper surface of a leaf
- (4) Stomata can only be found on the lower surface of a leaf.

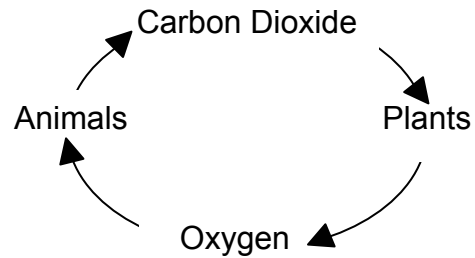
3. Which one of the following comparisons between respiration and Photosynthesis of plants is correct?

	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

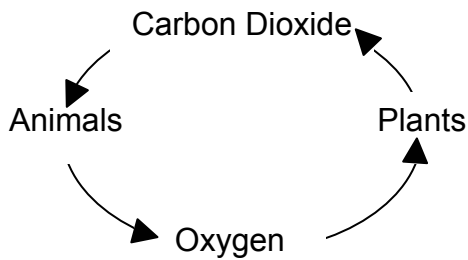
4. Which one of the following cycles below correctly shows the relation between the respiration of animals and the photosynthesis of green plants?



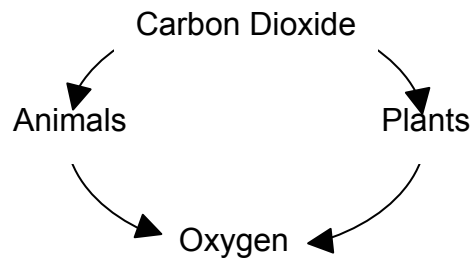
(1)



(2)



(3)

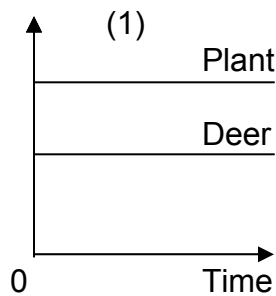


(4)

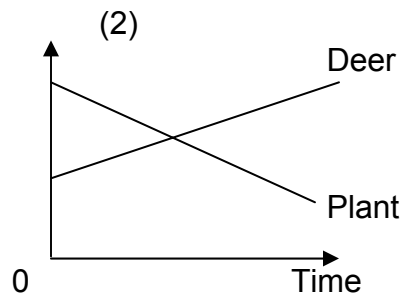
5. Look at the food chain shown below:



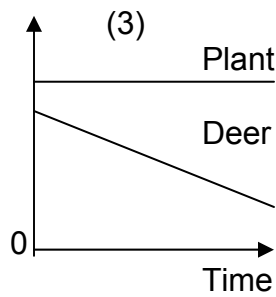
If all the lions were killed by hunters, which one of the following graphs would correctly show the populations of plants and deers?



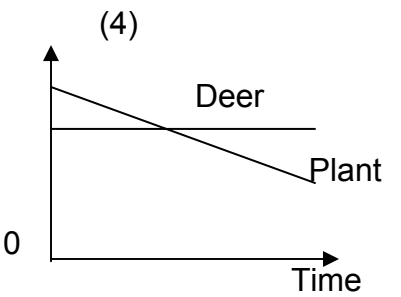
(1)



(2)



(3)



(4)

6. Which one of the following represents a food chain?

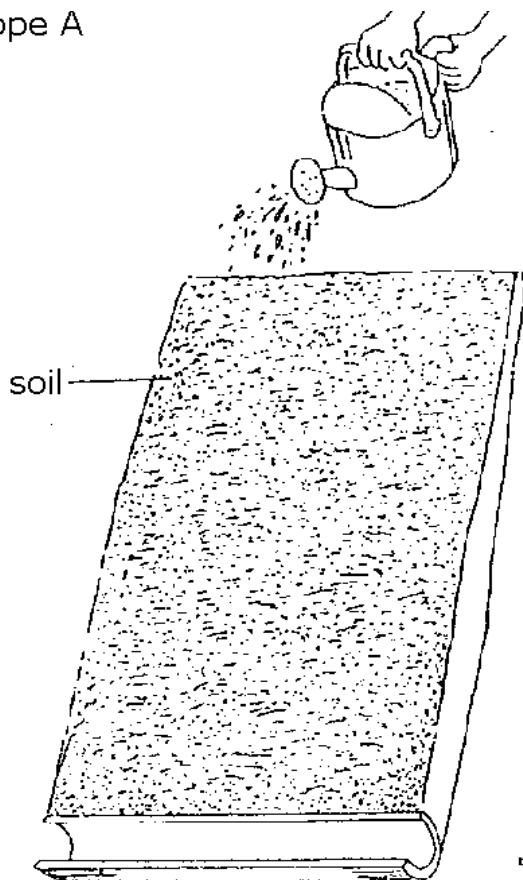
- (1) animals → carbon dioxide → plants
- (2) egg → tadpole → frog
- (3) plant → caterpillar → mynah
- (4) plant → oxygen → mynah

7. Which one of the following plants is used in skin care products

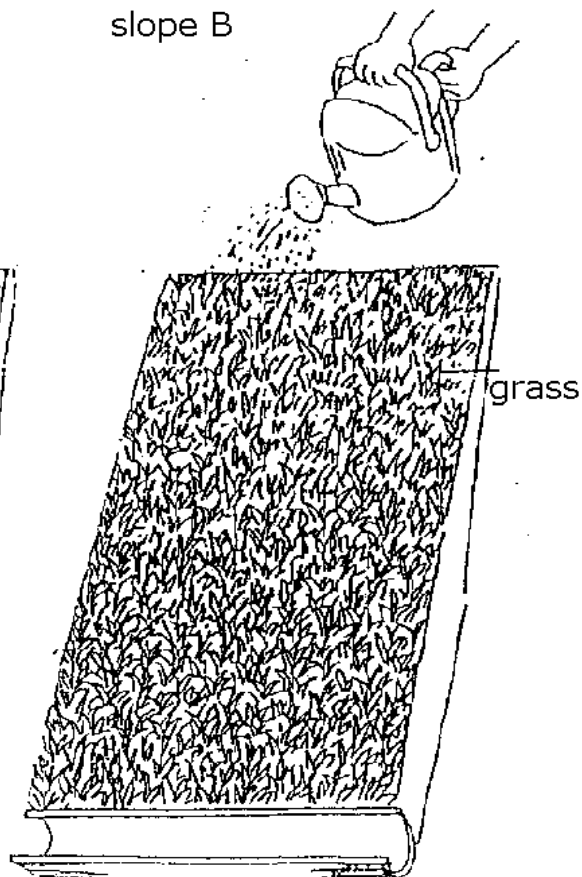
- (1) Alamanda
- (2) Aloe Vera
- (3) Oleander
- (4) Poinsettia

8. Mr Lin used a watering can to pour equal amount of water from the same height over two slopes, A and B. The two slopes had the same surface area as shown in the figures below.

slope A



slope B



Mr Lin observed that more soil was washed down from slope A than from slope B. What can you conclude from this observation?

- (1) The grass on Slope B absorbs water.
- (2) The grass helps to hold onto the soil.
- (3) The soil absorbs water.
- (4) The water flows down from the slopes.

9. Weeds are unwanted plants which farmers and gardeners constantly remove. This is because weeds compete with other plants for basic needs for the growth of plants. Which of the following do the weeds compete for with the plants?

- A: space
- B: starch
- C: sunlight
- D: water

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

10. Centipedes and woodlice are two animals that are commonly found in a rotting log habitat. Which one of the following best describes the conditions of a rotting log habitat?

- (1) airy and bright
- (2) cold and wet
- (3) dry and hot
- (4) dark and moist

11. Which one of the following animals has the incorrect adaptation describing it?

	ANIMAL	ADAPTATION
(1)	Goldfish	Has streamlined body shape
(2)	Chameleon	Can change colour to camouflage itself
(3)	Snowy owl	Has a thick layer of fat under its features
(4)	Pond skater	Can use gills to breathe in water

12. Which of the following plants are dispersed by wind?

- A: Angsana
- B: Lalang
- C: Love Grass

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

13. Which of the following animals have a thick layer of fact under their skin to help keep warm?

- A: Arctic Fox
- B: Arctic Hare
- C: Musk Ox
- D: Polar Bear

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

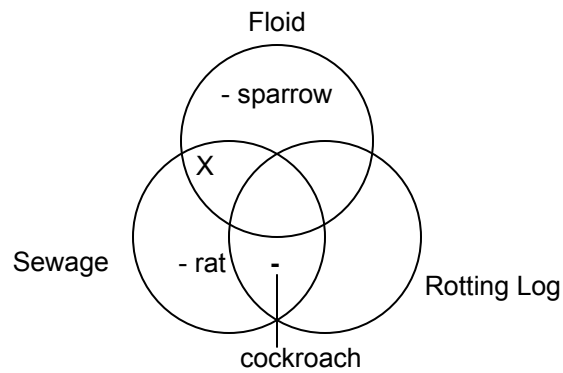
14. The animals given in the box below can be grouped together.

Crab	Fish	Prawn	Tadpole
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- A: They are food consumers
- B: They have gills to help them breathe in water
- C: They live in sea water

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

Study the Venn diagram shown below and answer questions 15 and 16.



15. Which animal is wrongly placed in the Venn diagram?

- (1) Cockroach
- (2) Termite
- (3) Rat
- (4) Sparrow

16. Which one of the following animals can be put in the area marked ' X ' on the Venn diagram above?

- A: caterpillar
- B: cricket
- C: mynah
- D: housefly

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

17. Some birds like ducks and penguins have webbed feet. Why do these birds have webbed feet?

- (1) To enable them to walk on land
- (2) To enable them to keep their feet wet.
- (3) To keep off predators from attacking them
- (4) To make it easier for them to swim

18. Farmers sometimes use pesticides in the form of chemicals in the soil. Earthworm has the ability to move away from unpleasant chemicals in the soil. Why is this important?

- (1) it can escape and ensure its own survival.
- (2) It can adapt to the unpleasant chemicals.
- (3) It can live longer due to the unpleasant chemicals.
- (4) It can still reproduce with these chemicals in the soil

19. What is one possible reason that elephants are in danger of becoming extinct?

- (1) They are domesticated to help man.
- (2) They are killed as they provide materials like ivory.
- (3) They are killed by accidents during hunts.
- (4) They are not adapted to the climate they live in,

20. What does conservation of nature mean?

- A: To prevent the waste of natural resources
- B: To preserve and maintain our environment.
- C: To prevent pollution of the environment
- D: TO improve the use of technology

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

21. How could we help to conserve water in our homes?

- (1) By reusing waste water for drinking
- (2) By reusing water used for washing to flush toilets
- (3) By using running water from a hose to wash cars
- (4) By pouring waste water into drains and canals.

22. How can factories help to protect and preserve the environment?

- A: By treating waste water in sewerage disposal plants.
- B: By disposing waste water in rivers faraway from urban areas.
- C: By recycling water.
- D: By using air pollution control equipment.

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

23. The owner of an orchard found that some of the fruits in his trees were infested with insect larvae. In order to protect the environment and save his crop, it is advisable for him to _____

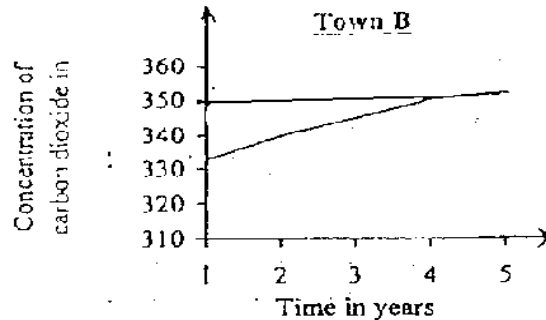
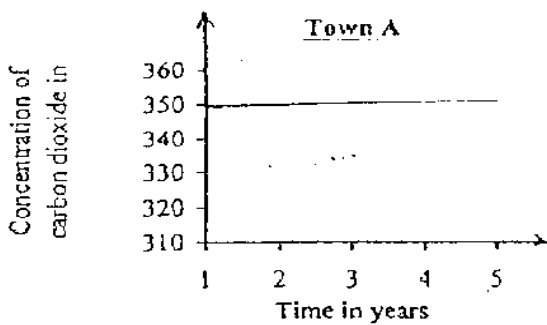
- (1) Spray any pesticide to get rid of the pests
- (2) pluck the infested fruits and burn them
- (3) introduce a predator that preys on the insect larvae
- (4) improve the water distribution system in his orchard

24. An oil spill from a tanker covered a large area of water near seashore. The marine life in that area was affected badly. Some seabirds were also found dead on the beach. What are the possible reasons that caused their death?

- A: They drank the water that was contaminated by the oil.
- B: They ate fish which had swallowed the oil and were poisoned.
- C: They breathed in the oil fumes near the water surface and Suffocated
- D: Their feather were stained with oil so that they were unable to Fly.

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

25. Study the two graphs below. They show the variation of concentration of carbon dioxide in the air in two small towns A and B over a period of five years.

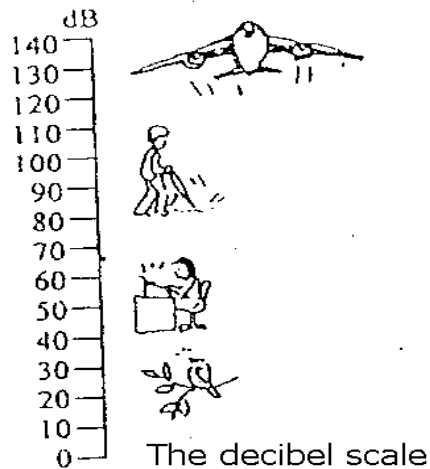


Based on the above graphs, which are the possible conclusion that you can make?

- A: Industrial activity in Town B has increased over the five years
- B: The number of motor vehicles in Town B has increased over the five years
- C: The number of motor vehicles in Town A has remained steady over the five years
- D: The air quality in Town B has become the same as the air quality in Town A in the fifth year.

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

26. The decibel scale below shows the degree of the loudness of some everyday sounds.



How loud could be the noise from a congested traffic be?

- (1) 30 decibels
- (2) 50 decibels
- (3) 80 decibels
- (4) 140 decibels

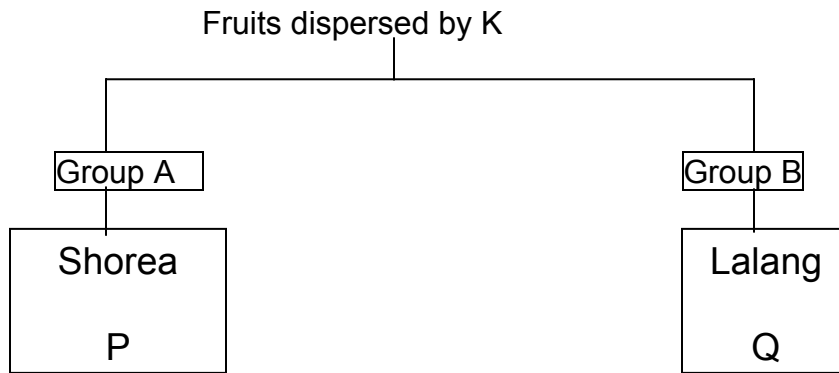
27. Ali was given 2 groups of things to study.

Biodegradable	Non-Biodegradable
Chicken bone	Aluminum can
Fish	Glass Bottle
Cheese	Ceramic Tile
Noodles	Clay pot

He made the inferences below. Which one of his inferences is correct?

- (1) All non-living things are non-biodegradable.
- (2) Biodegradable objects come only from animals
- (3) Most objects that are from living resources are biodegradable
- (4) All non-biodegradable objects are hard.

28. Study the classification table below.



In the classification above, which of the following can be put in place of K, P and Q?

	K	P	Q
(1)	Wind	cotton	love grass
(2)	Wind	angsana	vernonia
(3)	animals	mimosa	guava
(4)	animals	African tulip	lady's finger

29. Which one of the following does not represent a community?

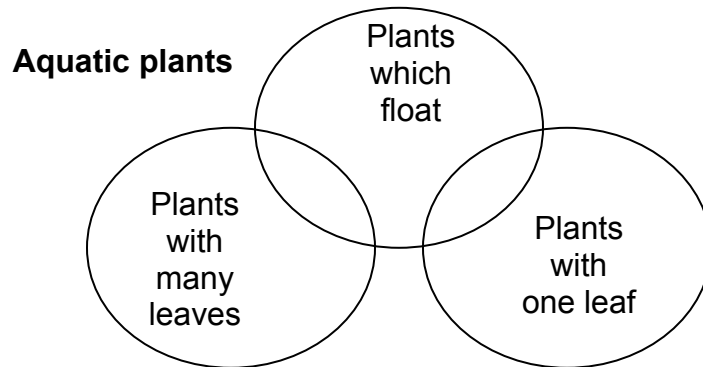
- (1) Ants living in the soil
- (2) Trees, birds and monkeys living in a forest.
- (3) Plants, butterflies and bees living in a field
- (4) Water lilies, mosquito larvae and fish living in a pond.

30. Mr Tan found some aphids in his rose garden. What action should he take to control or reduce the population size of the aphids in his garden?

- (1) He should grow different species of roses
- (2) He should release some ladybirds into his rose garden
- (3) He should spray pesticides on his rose plants everyday.
- (4) He should plant some trees in his garden to attract the aphids

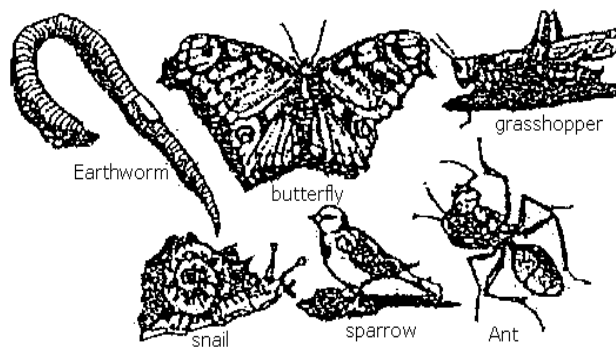
For questions 31 to 46, write your answers in this booklet. The number of marks available is shown in brackets [] at the end of each question or part-question. (40 marks)

31. The Venn diagram below show some plant in and aquatic community.



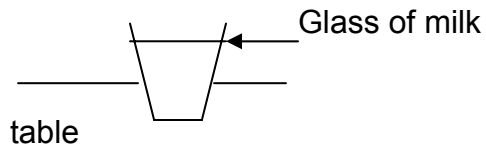
- (a) Mark with a 'Z' where you would place water lily in the above Venn diagram. Put a dot beside Z to indicate the exact location in the Venn diagram. [1]
- (b) Name one totally submerged plant in an aquatic community. [1]
-

32. The diagram below show some animals that either live on or are visitors to a papaya plant.



- (a) What community do these animals belong to? [1]
-
- (b) If all the earthworms around the papaya plant are removed, how would this affect the sparrow population? [1]
-

33. A glass of milk is left on a table. After a few days, it turned bad and gave off a foul smell.



(a) What caused it to give off a bad smell? [1]

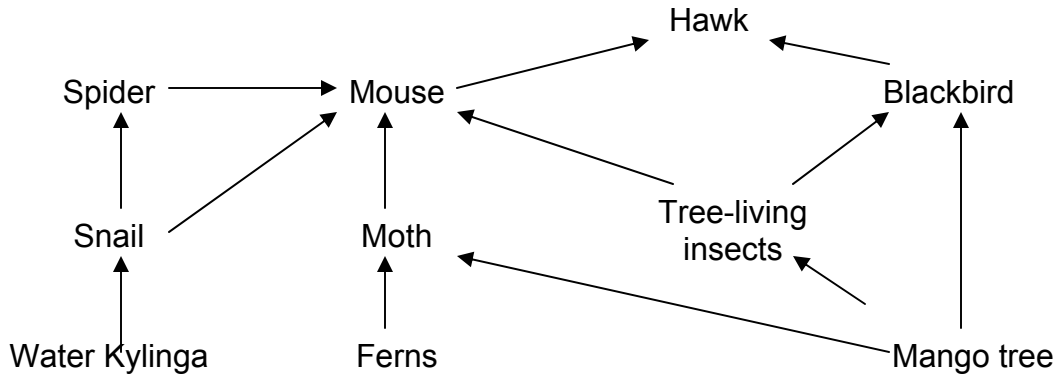
(b) How could this have been prevented ? Explain your answer. [1]

34. Jamie made two observations during her stroll at Bukit Gombak Nature Park. Explain each of her observation that she has made.

(a) Mushrooms and bracket fungi are always found near or on rotting plants in the park [1]

(b) The fallen leaves in the park never seem to pile up over the years. [1]

35. Study the food web and answer the questions below.



(a) Name an organism that is an omnivore. [1]

(b) Name an organism that is both a predator and a prey [1]

(c) Why is it necessary to have the hawk in the food web? [1]

36. The following animals in Groups A and B are found on the mango tree.

Group A	Feeds on	Group B	Feeds on
Caterpillar	Fresh leaves	Spider	Live animals
Stink Bug	Seeds	Dung beetle	Decaying animals
White flies	Sap		

(a) How re the above animals grouped? [1]

Group A : _____

Group B : _____

(b) State one similarity between the caterpillar and the spider. [1]

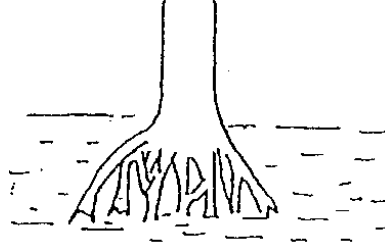
37. The pictures below show two animals X and Y



(a) State one adaptation of animal X that helps it to prey on Y [1]

(b) State one adaptation of animal Y that helps to protect it from X [1]

38. The picture below show the roots of the mangrove tree.



(a) How does the mangrove tree shown above breather in soft, swampy ground? [1]

(b) As the ground is constantly flooded with water, How does the tree support itself in such soft ground? [1]

39. The pictures of two animals A and B are shown below.



A



B

(a) State one similar feature between animal A and B which helps them move easily in water [1]

(b) State two differences between the two animals(DO not compare their size.) [2]

(i)

(ii)

40. The picture below show two birds



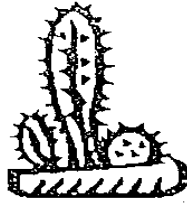
(a) State one feature that makes the bird an efficient 'flying machine'[1]

(b) Name a flying bird and a flightless bird [2]

A flying bird:

A flightless Bird:

41. The picture below shows a pot of cacti, Cacti are commonly found in the desert. The stem of the cactus has a layer of waxy covering.

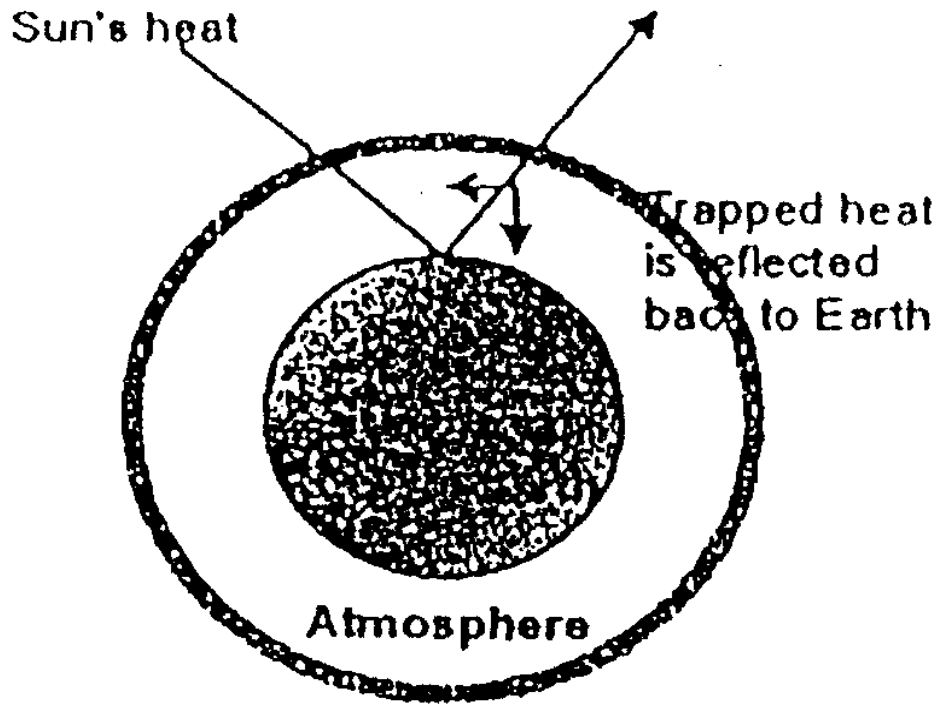


- (a) How does the waxy covering help it to survive in the desert? [1]

- (b) The cactus has a fat barrel like stem. State on function of having such stem. [1]

- (c) Which part of the cactus carries out photosynthesis? [1]

42. The diagram below explains the green house effect that air pollution bring about.



(a) What happens to the temperature on earth when trapped heat is reflected back to earth? [1]

(b) Name one effect of global warming. [1]

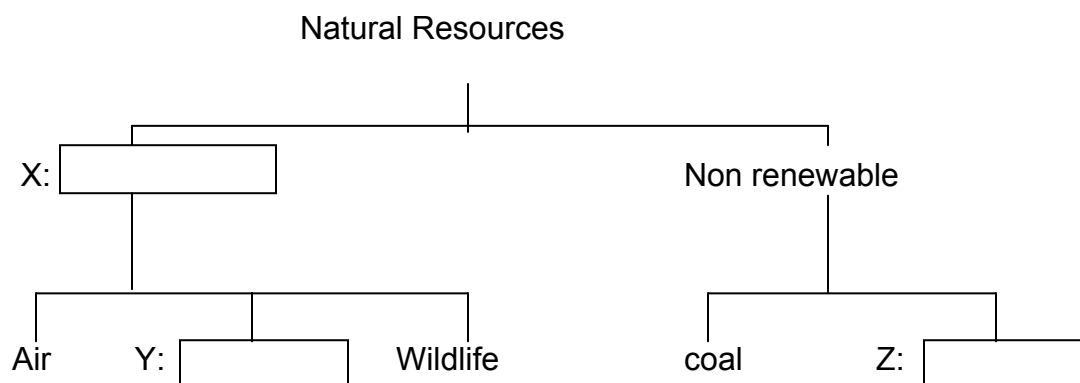
43. Timothy placed the same number of angelfish into four containers with water from different sources. He fed the fishes regularly. The table below records the number of angel fish left in the four containers on four consecutive weeks.

Week	Number of Angelfish left			
	Drain water	Tap water	River water	Rain water
1	10	10	10	10
2	10	10	11	10
3	11	10	13	8
4	12	11	15	5

- (a) From the above data collected, which sample of water is likely to be polluted? [1]

- (b) State one possible pollutant that is present in the polluted water [1]

44. Study the classification diagram below. Fill in the boxes with suitable answers. [3]



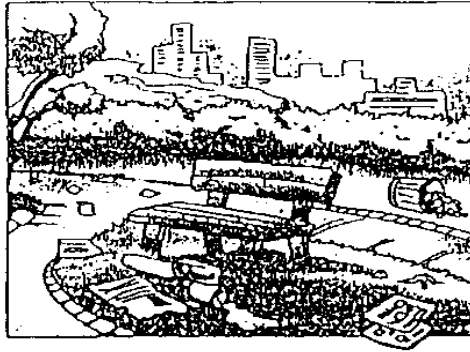
45. Residents staying in blocks of flats next to an expressway are facing different types of pollution caused by the vehicles during the peak hours.

- (a) Name one way to help the vehicles reduce noise pollution. [1]

- (b) Name one way to help reduce air pollution.

- (c) Name one pollutant that is present in the polluted air. [1]

46. Some children were doing community service work at a polluted park shown below.



The following garbage were collected by them

Plastic bottle	banana skins
Tin cans	glass jars
Newspaper	snack wrappers

- (a) What is the best way to dispose these garbage? Write the garbage items in the correct sections below. [3]

Incineration	Recycling

- (b) Why is it necessary to dispose these items in the proper way? [1]

End of Paper