Grade : VII

Chapter 17. Forest Our Lifeline

Basic concepts – A Flow Chart

FOREST

Large area of land thickly covered with trees, bushes, etc.

Importance of Forests

- Provide timber.
- Purify air .
- Provide shelter.
- Prevent soil erosion.
- Control floods
- Noise absorbers.

Independence of plants and animals in forests

- Plants and animals depend on each other to remain alive.
- All organisms interact with each other and their physical environment to derive energy and survive.

Needs for Conservation of Forests

- Amount of carbon dioxide in air will increase, resulting in the increase of earth's temperature.
- Animals will not get food and shelter.
- Soil will not hold water, which will cause floods.
- Endanger to lives and environment.

Conservation of Forests

- Do not allow overgrazing.
- Promote afforestation.
- Protect wildlife.
- Control forest fires.

Food Chain

- Interdependence between producers and consumers studied in form of various linkages that appear as a chain.
- Grass → Rabbit → (Fox → Lion
  (Producer) (Primary Consumer) (Secondary consumer) (Tertiary Consumer)

Food Web

A system of interdependent food chains used to represent various relationships of organisms.

- Stands for miniature circuit breakers .
- These are switches which automatically turn off when current in a circuit exceeds the safe limit

Know the Terms

- **Canopy** : Branches of the tall trees look like a root is known as canopy.
- **Decomposers** : Micro – organisms which convert dead plants and animals to to humus are called decomposers.
- **Deforestation** : Cutting of the plants.
- **Humus** : Decaying biological matter of the soil is known as humus.
- **Soil erosion** : Depletion of upper layer of soil.

Objective Type Questions

(1 Mark each)

I. Multiple choice questions

1. Which one is not a wild animal ?

a. Boar b. Jackal c. Bison d. Goat

2. Decomposes convert the dead plant and animal tissue into.

a. Clay b. inorganic debris c. Humus d. Soil

3. What is the role of forests?

a. Provide food, shelter, medicines b. Prevent soil erosion

c. Prevent food d. All of these

4. A series of eating and being eaten is called?

a. Food chain b. Food web c. Food series d .Food hub

5. Which one is an animal product ?

a. Humus b. Clay c. Gum d. Honey

6. Which of the following serve as green lungs?

a. Green pigment of the plants b. Forests

c. Kitchen gardens d. Green house gases

7. Boojho visited a forest near his own with his classmates and his teacher. As they were entering the forest, their class teacher told them not to make nnoise in the forest as noise could disturb the:

a. birds b. animals c. both birds and animals d .Plants

8. Which among the following forest animals is the smallest ?

a. Fox b. Boar c. Bison d. porcupine

9. Which of the following has the strongest stem?

a. A tree b. A creeper c. A climber d. A bush

10. Which of eh following is not prepared from the wood obtained from forest?

a. Paper b. Thermocol c. Matchsticks d. plywood

11. Which of the following is not the name of tree?

a. Teak b. Sal c. Porcupine d. kachnar

12. Pick the option which gives the names of a tree and an animal, respectively form the following:

a. Semal, hornbill b. Sal, Khair c. Chinkara, blue bull d. neem, palash

13. Which of the products is not obtained form a forest?

a. Honey b. Catechu c. Gum d. Ginger

14. The branch part of a tree above the stem is known as:

a. Crown b. Canopy c. Sampling d. Ginger

15. Forests are not responsible for:

a. Providing medicinal plants b. Maintaining the flow of water into the streams

c. Creating flood conditions d. Absorbing rainwater and maintaining water table.

1. d	2. c	3. d	4. a	5. d	6. b	7.c	8. d
9. a	10. b	11. c	12. a	13. d	14. a	15. c	

II. Multiple choice questions

1.Which one of the following is not a wild animal?

a) Boar b) Jackal c) Bison d) Goat

2.Decomposers convert the dead plant and animal tissue into:

a) clay b) Inorganic debris c) Humus d) soil

3. What is the role of forests?

a) provide food, shelter, water and medicines

b)Prevent soil erosion

c) Prevent floods

d) All of these

4. The series of eating and being eaten is called

a) Food chain b) Food web c) Food series d) Food hub

1. d	2. c	3. d	4. a

I. Fill in the blanks

1. The insets, butterflies and birds help flowering plants in _____.
2. A forest is a purifier of _____ and _____.
3. Herbs form the _____ layer in the forest.
4. The decaying leaves and animal droppings in the forest enrich the _____.
5. The dark coloured substance on forest floor is _____.

1. Pollination	2. Water, air	3. Lowest	4. Soil	5. Humus

II. Fill in the blanks

1. Complete the following with a suitable word/words:

i) Forests protect the .....from erosion

ii) Plants release.....through the process of photosynthesis

iii) .....helps forests to grow and regenerate.

iv) The forests keep on .....and .....and can.....

v) Different layers of vegetation provide .....and .....for animals.

i)Soil	ii) Oxygen	iii)Soil	iv) growing, changing, regenerate	v) food, shelter

I. Match the following.

I. Column A	Column B
a. canopy	i. cutting of forests
b. Crown	ii. wild animal
c. Micro- organism	iii. Habitat of wild animals
d. Understoreys	iv. portion of tree
e. Forests	v. Portion of tree above main stem
f. sealing wax	vi. Plants growing under tall trees

g. Boar	vii. Roof formed by tree over other plants
h. Deforestation	viii. Decomposers

a. vii	b. v	c. viii	d. vi	e. iv	f. iii	g. ii	h. i

I. Column A	Column B
a. Decomposers	i. dead plant and animal tissues
b. Canopy	ii. habitats for wildlife
c. Procupine	iii. Micro – organisms
d. Humus	iv. Wild animal
e. forest	v. branches of tall trees

a. iii.	b. v	c. iv	d. i	e. ii

II. Match the following.

Column A	Column B
i) Humus	a) Depend on plants for food
ii) Forests	b) Branchy part of the tree
iii) Herbivores	c) Helps forests to grow
iv) Crown	d) Dark coloured matter
v) Soil	e) Protect soil from erosion.

i. d	ii. e	iii. a	iv. b	v. c

III. True or False

Column A	Column B
a. Decomposers	i. Dead plant and animal tissues
b. Canopy	ii . Habitats for wild life
c. Porcupine	iii. Micro- organisms
d. Humus	iv. wild animal
e. Forest	v. Branches of tall trees

a. iii	b. v	c. iv	d. i	e. ii

I. True or False

a. Forests influence climate, water cycle and air quality.

b. in a forest, trees form the uppermost layer, followed by herbs. The shrubs form the lowest layer, followed by herbs. The shrubs form the lowest layer of vegetation.

c. The forest keeps on growing and changing and can regenerate.

d. Forests protect the soil from erosion.

a. True	b. False (the sequence is trees, shrubs and lowest one herbs)	c. True	d. True

II. True or False

1. Write true or false against the following statements

i) Forests release oxygen

ii) Plants can prepare their own food

iii) plants are Saprotrophs.

iv) The roots of trees are called crown of tree.

v) Forests are dynamic living entity.

i) True	ii) True	iii) False	iv) False	v) True

Quiz Time

1. Name the biotic community dominated by trees and spread over a large area.
2. Are forests renewable of non-renewable natural resources?
3. What is overhanging covering like a roof over other plants in the forest called?
4. Name two animals which live in deeper areas of the forest.
5. What is crown of a tree?
6. What is dark coloured organic substance called which is formed by the decaying of plants and animals?
7. Write any two useful products obtained from forests.
8. Write the role of humus in the soil
9. Write the name of the chain of organisms of eating and being eaten.
10. In which class of food pattern does man belong?

1. Forest	2.Renewable	3.Canopy
4.i)Bison ii) Elephants	5.The branchy part of a tree above the stem is called crown	6.Humus
7. Gum and honey	8. It is used to increase fertility of soil	9. Food chain
10.Omnivores		

NCERT Corner

I. Intext Questions.

1. Observe various things in your home and make a list of those which are made from material which may have been obtained from the forest.

Doors and window frames, table , chair, bed, paper, match stick, gum, spices etc.

2. Would we see similar kind of trees in every forest?

No, Because of varying climatic conditions there are variations in the types of trees and other plants. The type of animals also vary from forest to forest.

3. In which layer of the soil would you find humus? What is its importance the soil?

Humus is found in the top layer of soil, the presence of humus ensures that the nutrient of the dead plants and animals pass into the soil. From there, these nutrients are again absorbed by the roots of the living plants.

4. What happens if an animal dies in the forests?

The dead animals are food for vultures, crows, jackals and insects.

5. If there were fewer trees, How will be water cycle be affected?

There will be less evaporation from plants and consequently less water vapour in the air. this will lead to less clouds and higher temperature. So there will not be much rain.

6. What would happen if it rain heavily in your town?

There will be water logging or even flood. Everything will be water logged. No food, no water no room to sleep. no traffic.

7. What would happen if forests disappear?

i. If forests disappear, the quantity of carbon dioxide in air will rise, leading to the increases in earth's temperature.

ii. In the absence of trees and plants ,the animals will lack food and shelter.

iii. In the absence of trees, the soil will not hold water, this will cause floods.

iv. Deforestation is a menace to our life and environment.

I. Textbook Questions

1. Explain how animals dwelling in the forest help it grow and regenerate.

Animals help in dispersing seeds of certain plants. The decaying animal dung also supplies nutrients to the seedling to grow. This is how animals help the forest to grow and regenerate.

2. Explain how forests prevent foods.

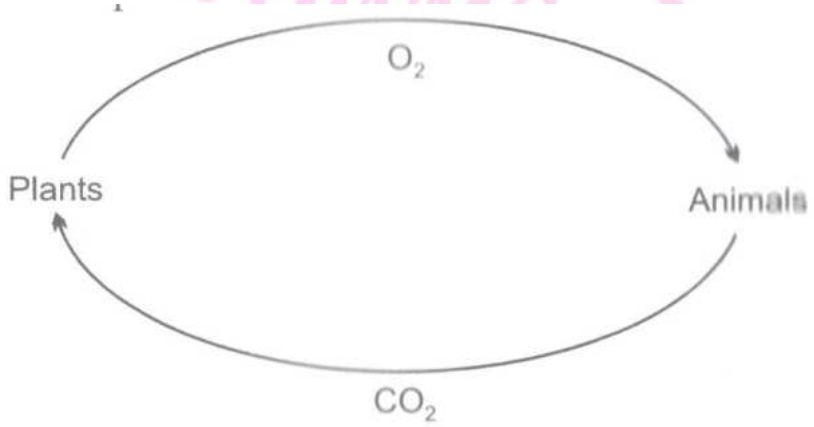
If trees are not present, rain will hit the ground directly and may flood the area around it. Heavy rain may also damage the soil. Roots of trees and grasses normally bind the soil together but in their absence, the soil will be washed away or eroded. The washed soil will get deposited in river and thus reduce water carrying capacity of rivers .this is one of the major causes of flood.

3. What are decomposers? Name any of them. What do they do in the forest?

The micro-organisms which convert the dead plants and animals to humus arenamed decomposers. Bacteria, mushroom etc. are decomposers. They decompose dead organisms and supply nutrient to trees.

4. Explain the role of forest in maintaining the balance between oxygen and carbon dioxide in the atmosphere.

Plants discharge oxygen through the process of photosynthesis. The plants aid the supply of oxygen for animal respiration. They also maintain the balance of Oxygen and carbon and carbon dioxide in the atmosphere.



5. Explain why there is no waste in forest.

The decomposers decompose the dead organisms the decomposed matter gets absorbed by plants as nutrients. So, there is no waste in forests.

6. List five products we get from forest.

i. wood, ii. medicine, iii. Spice, iv. Fodder, v. honey

7. Fill in the blanks:

a. The insects, butterflies, honeybees and birds help flowering plants in _____

b. A forest is a purifier of _____ and _____.

c. Herbs form the _____ layer in the forest.

d. The decaying leaves and animals dropping in a forest enrich the _____.

a. Pollination	b. Water, air	c. Ground	d. Humus

8. Why should be worry about the conditions and issues related to forests far from us?

Forests are very useful to us. They clean air, play a major role in water cycle. Supply various items and so on so, we should worry about the conditions and issues related to forests far from us.

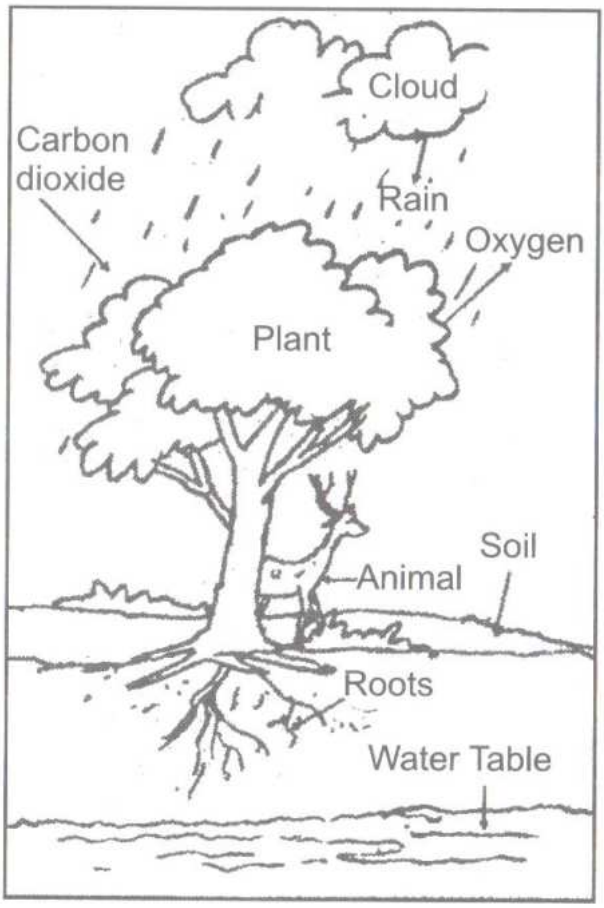
9. Explain why there is a need of variety of animal and plant in a forest.

Verity of animals is essential for their survival and maintenance of food chain. For example, grass is eaten by insects which in turn are eaten by the frog. The frog is eaten by snakes which in turn are eaten by eagles. Thus it forms a food chain.

Grass →insects→ frog → snake → eagle

Many food chains can be found in the forest. All food chains are inter-connects other food chains. No part of the forest is independent of the other parts. If we take off one component of the other parts .of the forest is independent of the other parts. If we take off one component, all other components would be thrown out.

10. In Fig., the artist has forgotten to put the labels and directions on the arrow. Mark the directions on the arrows and label the diagram using the following labels.: clouds, rain, atmosphere, carbon dioxide, oxygen, plants, animals ,soil, roots water table.



11. Which of the following is not a forest product?

i. Gum ii. Plywood iii. Sealing wax iv. Kerosene

(iv) kerosene

12. Which of the following statements is not correct?

i. Forests protect the soil from erosion.

ii. Plants and animals in a forest are not dependent on one another.

iii. forests influence the climate and water cycle.

iv. Soil helps forests to grow an regenerate.

(ii). Plants and animals in a forest are not dependent on one another.

13. Micro- organisms act upon the dead plants to produce.

i. sand, ii. mushrooms, iii. Humus, iv. Wood

(iii) humus.

I. Very Short Answer Type Question.

1. Name some animals which live in deeper areas of the forest

Boars, bisons, jackals, porcupines, elephants etc. Live in deeper areas of the forest.

2. What is crown of a tree?

The branchy part of a tree above the stem is called crown of a tree.

3. What is canopy?

The branches of tall trees which look like a roof over the other plants in the forest is called canopy.

4. There is a variation in the types of trees and other plants in different forests Why is it so?

It is due to the different climatic conditions.

5. Would you see similar kinds of trees and animals in every forest?

No, we do not see similar kinds of trees and animals in every forest.

6. What are herbivores?

The organisms which depend on plants for their food are called herbivores.

7. Give examples of some herbivores

Rat, rabbit, grasshopper, squirrel and cow etc.

8. What are carnivores?

The organisms which are flesh eaters and depend on other animals for their food are called carnivores

9. Name some carnivores.

Lion, tiger, frog, snake and eagle etc.

10. What do you mean by food chain?

The organisms which take their food from plants get eaten by other organisms and so on. This chain of eating and being eaten is called food chain.

12. What happens when one food chain is disturbed?

If any one food chain is disturbed, it affects the other food chains because all the other food chains because all the food chains are interlinked.

13. What happens when one component is removed from the forests?

Every component of forest depends on other. If we remove one component all other component would be affected.

14. What are decomposers?

The micro-organisms which convert the dead plants and animals to humus are known as decomposers.

15. What is humus?

The dark coloured organic substance formed by the decaying of plants and animals is called humus.

16. What is the importance of humus to the soil?

Humus increases the fertility of the soil and maintains it for a long time.

17. How can we recognize the presence of an animal in the forest?

By their droppings and foot prints, we can recognize the presence of an animal in the forest.

18. Write the name of some useful products obtained from forests

Wax, Gum, Honey, Silk etc.

19. How do plants help in water cycle?

Trees take in water from their roots and release water vapour into the air which helps in the formation of clouds and rainfall.

20. How do animals help forest to grow?

The animals disperse the seeds of certain plants and help the forest to grow and regenerate.

21. Name the scientist working in the university?

Prof. Ahmad.

22. Why we should remain quiet, while passing through a forest?

Forest is the shelter of many kinds of animals, our noise can disturb them.

23. What is the percentage of forest cover in India?

21%

24. What do you mean by under storeys in forest?

The crown forms horizontal layers in the forest which are called under storeys.

25. Do all the forests have same types of trees?

No, there different types of trees in different forests.

26. On which factor the variation of trees depend?

Variation of trees in the forest depend on the climatic conditions.

27. Name some trees found in the forests

Sal, Semal, Teak, Sagon, Sheesham, Palash and Neem, etc.

28. How many types of plants on the bases of their size and age?

There are three types of plants. They are herbs, shrubs and trees

29. What are decomposers?

The micro-organisms which convert the dead plants and animals into simples form are called decomposers.

30. How do people depend on forests?

The forests proved them with food. Shelter, water and medicines.

II. Very Short Answer Type Question.

1. There is a vegetation in the types of trees and other plants in different forest. Why is it so?

It is due to different climatic conditions.

2. What are herbivores?

The organisms which depend on plants for their food are called herbivores

3. Give example of some herbivores?

Rat, rabbit, grasshopper, cow.

4. What are carnivores?

The organisms which depend on other animals for their food are called carnivores.

5. Name some carnivores.

Lion, tiger, frog, snake, and eagle.

6. Write an example of food chain.

Grass → insect → frog → snake → eagle.

III. Very Short Answer Type Question.

1. Paheli while moving in a forest observed that there was no noise pollution, though lots of heavy vehicles were passing from the nearby highway. Explain why.

[NCERT Exemplar]

Forest absorbs the noise

2. Paheli wrote a food chain in the following way:

Frog eagle insects grass snake

The chain I not in the correct order. Help her to write the food chain correctly.

Grass insects frog snake eagle

3. What is a canopy in a forest?

Branches of tall trees look like a roof on the other plants in the forest. This is called a canopy.

4. "A bunch of seedlings was seen sprouting on a heap of animal dropping in a forest How do you think is the seeding benefited from the animal dung?

The decaying animal dung provides nutrients to the growing seedlings.

5. What is a forest?

Forest is a large area covered with variety of flora and inhabiting various organisms.

6. Which part/ parts of a tree is / are helpful in purifying air?

Leaves are helpful in purifying air.

7. What do you understand by crown of a tree?

The branchy pat of a tree above the stem is known as the crown.

8. Expand SPM.

Suspended Particulate Matter.

I. Short Answer Type Question.

1. Two friends shared their experiences of their vacation trip to two different forests. Do you think they would have seen the same type of plants and animals during their respective trips? Give reason.

No, They would not have seen the same type of plants and animals. This is so because climatic conditions in the two forests would vary leading to variations in the types of plants and animals

2. Deforestation may lead to floods. Why?

Lessar number of trees will be available due to deforestation. In this condition of absence of trees the soil will not hold water leading to floods.

3. List some consequences of deforestation.

(a) Loss of plants which provide herbs, medicines, fruits, etc.

(b) Global warming

(c) Destruction if ecosystem

(d) Soil erosion

4. Explain why there is a need of variety of animals and plants in a forest.

A greater variety of plants and animals in the forests helps it to regenerate and grow. Greater variety of plants means more food and habitat for the herbivores. An increase in herbivores means more food for carnivores. Decomposers help to maintain the supply of nutrients to the soil and to the growing plants. This wide variety makes forest a dynamic living entity.

5. How do forests help to maintain the water table?

Through transpiration from the leaf surfaces of trees in forests, the water vapour reaches the atmosphere resulting in rainfall which maintains the water table.

6. How can forests be conserved?

(a) By not allowing overgrazing.

(b) Wildlife should be protected.

(c) Afforestation should be undertaken.

(d) Forest fires should be controlled.

7. What is the 'economic significance' of forests?

Forests produce a number of economically important products like timber, bamboo, cane, oils, resins, etc .Forest animals provide honey, ivory, lac, etc.

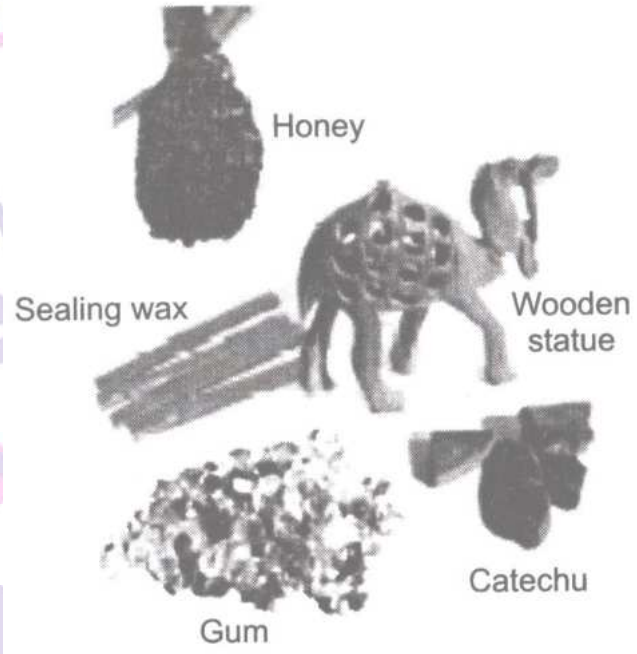
8. How do fallen leaves help the soil in forest?

Tiny insects and ants feed on the fallen leaves and convert them into dark-coloured humus which makes the soil fertile.

II. Short Answer Type Question.

1. What are the main products which we get from forests?

We get plywood, fuel wood, boxes, paper, matchsticks and furniture from the forests. Gum, Oils , spices, fodder for animals and medicinal plants are also some products which we get from forests.



2. Who would have planted these forest trees?

The trees produce enough seeds in nature. The forest floor provides favourable conditions for them to germinate and develop into seedlings and saplings. Some of them grow up into trees.

3. What is meant by the understoreys?

The trees have crowns of different sizes and types .These create different horizontal layers in the forest. These are known as understoreys. Giant and tall trees constitute the top layer followed by shrubs and tall grasses and herbs form the lowest layer.

4. How does the forest floor look?

The forest floor looks dark coloured and is covered with a layer of dead and decaying leaves, fruits seeds twigs and small herbs. The decaying matter is moist and warm. It feels like a spongy carpet.

5. Explain the cycle of nutrients in the forests.

The humus indicated that the nutrients of the dead plants and animals are released into the soil. From soil these nutrients are again absorbed by roots of the living plants. The dead

animals become food for vultures, crows, jackals and insects. In this way, the nutrients are recycled.

6. Why are the forests called green lungs?

The plants release oxygen through the process of photosynthesis. The plants help to provide oxygen to animals for respiration. They also maintain the balance of oxygen and carbon dioxide in the atmosphere. That is why forests are called green lungs.

7. Explain the importance of dense bushes and tall grasses for animals living in the forests.

The dense bushes and the tall grasses provide animals with the food and shelter. They also protect herbivores from carnivores that live in the forests.

8. What do you mean by the term deforestation? Write its causes also

The excessive cutting of forests and trees is called deforestation. The number of trees that are being cut is usually much more than a forest can grow naturally. This results in deforestation takes place by clearing forest land for cultivation, construction of houses, roads and dams.

9. How do animals help in growing the trees?

Decomposers in the forest convert dead organic matter of plants and animals into nutrients which go to the soil and ultimately nourish the plants. The animals also disperse the seeds of certain plants and help the forest to grow and regenerate. The decaying animal dung also provides nutrients for the seedlings to grow.

10. Explain the interdependence of various components of forests

The green plants produce food. All animals, whether herbivores or carnivores depend directly or indirectly on plants for food. Organisms which feed on plants often get eaten by other organisms and so on. For example grass is eaten by insects which in turn is eaten by the frog. The frog is consumed by snakes. This is said to form a food chain

Grass→ Insect → Frog→ Snake→Eagle

There are various food chains in the forests. All food chains in the forests. All food chains are inter linked. If any one food chain is disturbed it affects other food chains. In this way every component of forest interdependent on each other.

11. "Forests are a dynamic living entity". Explain the statement.

The wide variety of animals help the forest to regenerate and grow. Decomposers convert dead plants and animals into humans and provide nutrients. More over by harbouring greater variety of plants the forest provide greater opportunities for food and habitat for the herbivores. Larger number of herbivores means increased availability of food for carnivores. Therefore it is correct to say that the forest are the dynamic living entity.

12. What are the main reasons for disappearance of forests?

There are following main reasons for disappearance of forests:

i) Construction of roads

ii) Construction of buildings

iii) Development in industries

iv) Increasing demand of wood day by day.

13. What do you mean by soil erosion? How is it prevented?

The removal of top fertile layer of soil by the action of wind and water called soil erosion. It is prevented by:

i)By growing more and more plants

ii) By avoiding deforestation.

III. Short Answer Type Question- I

1. Why forests are called green lungs?

Forests are called green lungs as they maintain the balance of oxygen and carbon dioxide. Carbon dioxide given out by animals during respiration is used by forest trees in photosynthesis resulting in release of oxygen. Hence, forests are known as green lungs.

2. Deforestation may lead to floods. Why?

Lesser number of trees will be available due to deforestation. In this condition of absence of trees the soil will not hold water lading to floods.

3. What will be the consequences of deforestation?

i. The amount of carbon dioxide in air will increase.

ii. Animals will not get food and shelter.

iii. Water holding capacity of soil will decrease which will result in floods.

iv. Rainfall will be less.

4. What is the importance of thick bushes and greases for animals living in the forest?

The dense bushed and the tall grass provides herbivore animals with food and shelter. They also protect them from carnivores that live in the forest.

5. How forests maintain the balance of oxygen and carbon dioxide?

Trees and other plants in a forest consume carbon dioxide during the process of photosynthesis and release O_2 to maintain the balance in amount of Co_2 and O_2

6. What is a food chain?

In nature herbs are eaten by herbivore, in turn herbivores are eaten by carnivores. This sequence of eating and being eaten, forms a chain called food chain. Example:

7. Nobody plants trees in forest then how so many trees are found in forests?

Seeds produced by forest tree are dispersed to long distance by wind and animals. when they get suitable condition they germinate and turn seedling and then saplings.

8. Who would have planted these forest trees?

The trees produce enough seeds in nature. The forest floor provides favourable conditions for them to germinate and develop into seedlings and saplings. Some of them grow up into trees.

9. What is meant by the understoreys?

The trees have crowns of different sized and types. These create different horizontal layers in the forest, these are known as understoreys, Giant and tall trees constitute the top layer followed by shrubs and tall grasses and herbs form the lowest layer.

10. Two friends shared their experience of their vacation trip to two different forests. Do you think they would have seen the same type of plants and animals during their respective trips? Given reason.

No, they would not have been seen the same type of plants and animals. this is so because climatic conditions in the two forests would vary leading to variations in the types of plants and animals.

11. "A bunch of seedlings were seen sprouting on a heap of animals dropping in a forest." How do you think is the seedling benefited from the animals dung?

The decaying animals dung provides nutrients to the growing seedlings.

12. Give names of any four birds which you expect to see in a forest.

Jungle crow, myna, dove, kingfisher, koel , blue , jay ornbill etc. (any four)

13. Name any four useful products other than wood, which we get from forests.

Gm, oils, spices, fodder for animals, medicinal plants, etc. (any Four)

14. Give any four factors which are responsible for the destruction of forests.

a. Construction of roads.

b. Construction of buildings

c. Industrial development

d. Increasing demand of wood

III. Short Answer Type Question- II

1. Explain the term autotroph, heterotrophy and saprotroph.

Autotrophs : Such living organisms which are capable of manufacturing their own food by the process of photosynthesis by using CO_2, water and light. E.g, green plants.

Hetrotorphs : Such organisms which are not capable of manufacturing their own food and depend for their food on other organisms are known as heterotrophs.

Saprotrophs : such hetrotrophs which obtain their nutrition from dead decaying organic material are called aprotophs.

2. "Forest is a dynamic living entity". Justify this statement.

The wide varieties of animals both herbivores and carnivores help the forest to regenerate and grow. The decomposers help in maintaining the supply of nutrients to the wide variety of growing plants in the forest which provide greater opportunities for food and habitat of herbivores which ensure food for carnivores. Therefore, the forest is a dynamic living entity full of life and vitality.

3. In which way forests are helpful in controlling flood and soil erosion?

Due to spoilage of forest trees, the rainwater drops fall slowly on the ground. The forest also slows down the speed of rainwater and allowed it to seep. In absence of tress the rainwater hits the ground directly and may flood the area around it. Roots of forest trees bind the soil together and thus prevents soil erosion also.

4. Write the importance of forest?

Importance of forests?

i. Forests provide us with oxygen.

ii. They maintain the balance of carbon dioxide and oxygen in atmosphere.

iii. They protect the soil.

iv. They help in brining good rainfall in the neighboring areas

v. They are the source of medicines, timber and other useful products and also provided wood.

5. How do forests help in controlling floods and maintain steady supply of water?

The uppermost layer of the forest canopy intercepts the flow of rain drops and most of the water comes down through the braches and stems of the trees. From leaves it dips slowly over branches of the shrubs and herbs. All this slows down the speed of raindrops and also slows down the speed of running water.

Thus, forests act as a natural absorber of rainwater and allows it to seep. It helps to maintain the water table throughout the year. In this way, forests help in controlling floods and maintain steady supply of water.

6. Reena is a student of class X of a Govt. School. she is a member of "Eco club" of her school. What suggestions would you like to give Reena to improve the environment in her school?

i. Growing plants and trees in the open area in the school.

ii. Arrangement for water harvesting.

iii. Reporting any kind of water leakage in the school.

7. All the needs of animals living in a forest are fulfilled. Justify this statement in a few sentences.

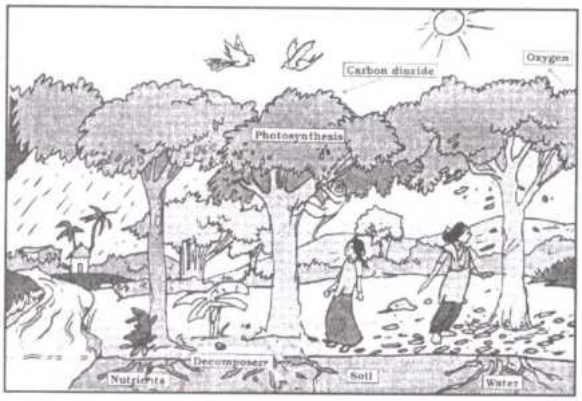
Forest provides home (shelter), Food and water to the animals living here.

8. People say that nothing goes waste in a forest. Can you explain. How?

i. Dry leaves and remains of dead animals are converted to a dark coloured substance called humus. This provides nutrients to the plants.

ii. Dead animals become food for vultures, Crows, jackals and insects .

9. Figure shows a part of a forest.



Write any three activities going on in the forest on the basis of this figure.

i. Oxygen is given out by plant leaves.

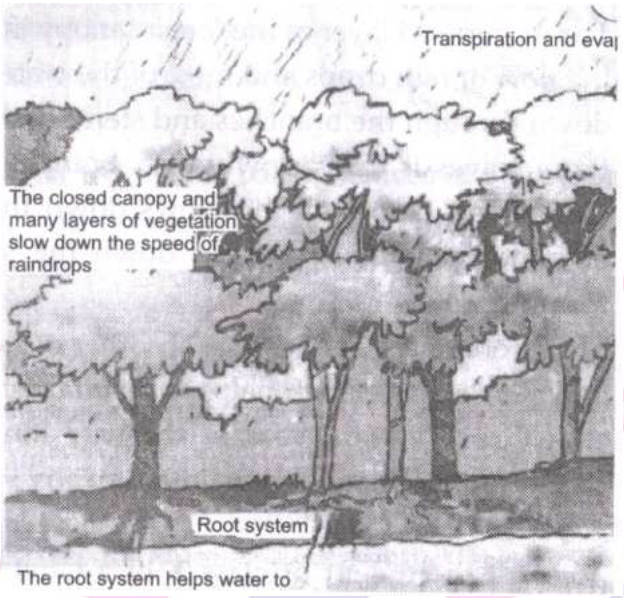
ii. Carbon dioxide is consumed by the plants to prepare their food by the process of photosynthesis.

iii. Decomposers play an important role in providing nutrients to plants

I. Long Answer Type Question-I

1. Explain how the forest act a natural absorber of rain water.

The forest acts as a natural absorber of rain water and allows it to seep. It helps to maintain the water table throughout the year. Forests not only helps in controlling floods but also help to maintain the flow of water in the streams so that we get a steady supply of water. On the other hand, if trees are not present rain hits the ground directly and may flood the area around it .heavy rain may also damage the soil. Roots of trees normally bind the soil together, but in their absence the soil is washed away or eroded.



2. State four reasons, Why we must preserve forest.

We must protect our forest because:

i. Forests provide us with oxygen

ii. they protect soil and provide habitat to a large number of animals.

iii. Forest help in bringing good rainfall in neighboring areas.

iv. They are sources of medicines, timber and many other useful products.

3. List any five points that would make your visit more fruitful.

i. make sure that you have permission to go into the forest.

ii. To make sure that you can find your way around. Get a map and go along with someone who is familiar with the area.

iii. Keep a record of the things you see and do.

iv. Record bird calls and other animal calls.

i. Learn to recognize animal droppings and never disturb nay animals.

4. "Forests are our lifeline." Write five sentences on this tropic. .

i. Forests give oxygen to keep us alive.

ii. Forests absorb carbon dioxide, a gas which in excess in atmosphere contribute to climatic changes.

iii. forests provide us wood, gum, medicinal plants and many more things.

iv. Forests save the soil from erosion.

v. Forests help in maintaining the ground water level.

5. Draw a figure showing two animals, two birds and a few trees as a part of a forest.

Picture of any forest with two animals and two birds.

II. Long Answer Type Question.

1. Explain autotrophs, heterotrops and saprotrohs.

Autotrophs : The organisms which are capable to prepare their own food by the process of photosynthesis are called autotrophs. They are also called producers. For example green plants.

Heterotrophs : The organisms which are not capable to prepare their own food by the process of photosynthesis but depend directly on plants for their food are called heterotrophs. For example : fungus

2. Explain that the forest is a dynamic living entity, full of life and vitality,

By harbouring greater variety of plants, the forest provides greater opportunities for food and habitat for the herbivores. Larger number of herbivores means increased availability of food for a variety of carnivores. The wide variety of animals help the forest to grow and regenerate. Decomposers help in the maintaining the supply of nutrients to the growing plants in the forest. Therefore the forest is a dynamic living entity, full of life and vitality.

3. What is the importance of forests?

Importance of forests:

i)Forests provide us oxygen

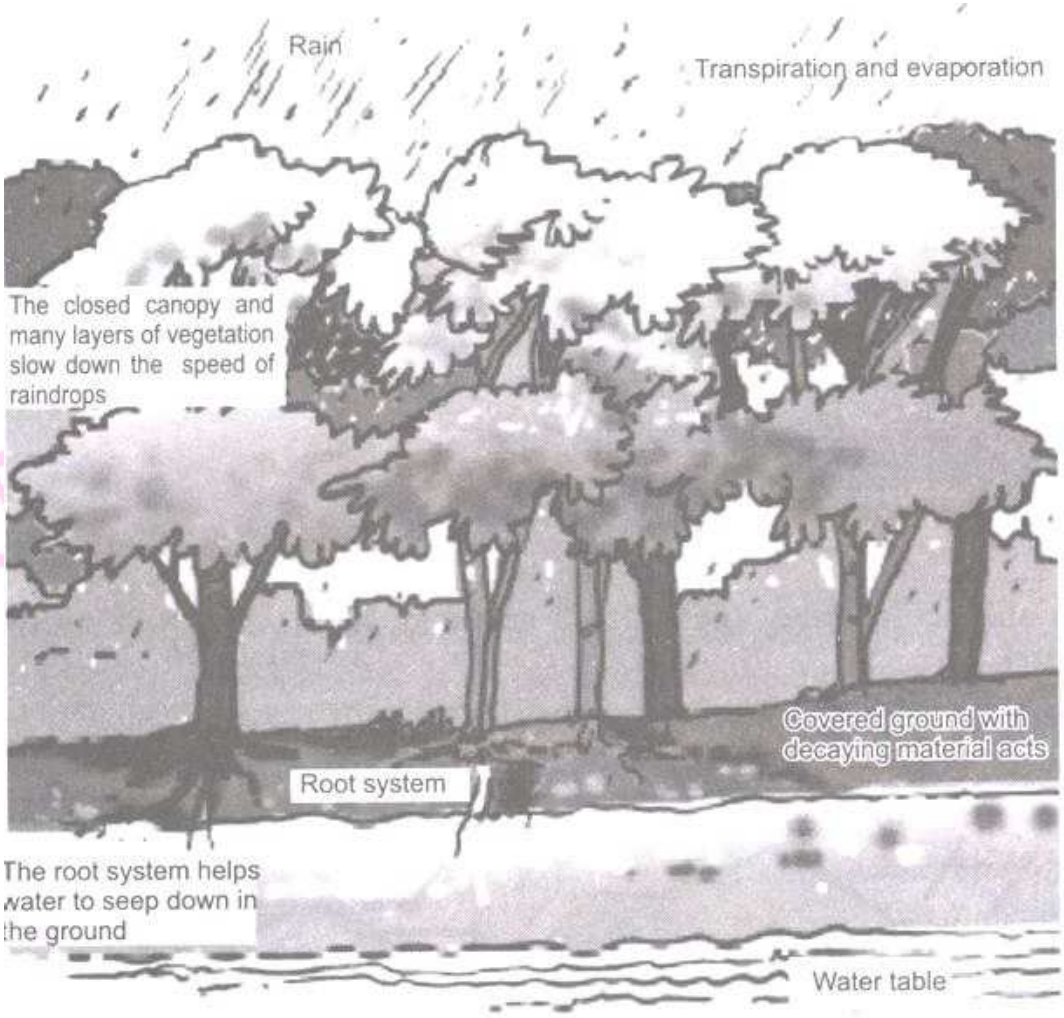
ii)They maintain the balance of carbon dioxide and oxygen in atmosphere

iii) They help in bringing good rainfall in the neighbouring areas,

iv) They are the source of medicinal plants, timber and other useful products and also provide wood.

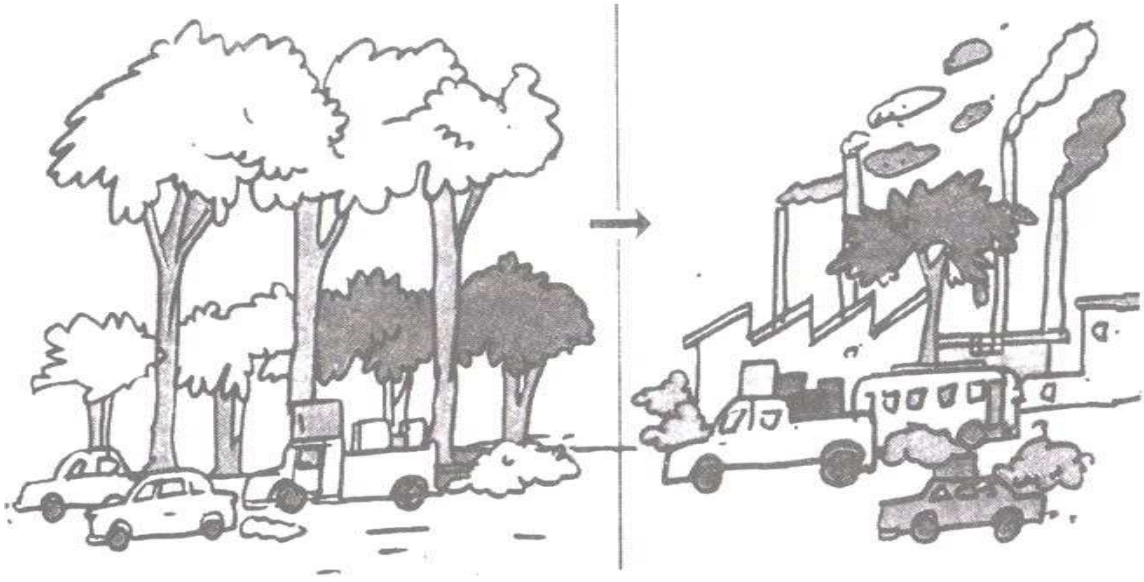
4. Explain how the forest acts as a natural absorber of rain water.

The forest acts as a natural absorber of rain water and allows it to seep. It helps to maintain the water table throughout the year. Forests not only help in controlling floods but also help to maintain the flow of water in the streams so that we get a steady supply of water. On the other hand, ig trees are not present rain hits the ground directly and may flood the area around it. Heavy rain may also damage the soil. Roots of trees normally bind the soil together, but in their absence the soil is washed away of eroded

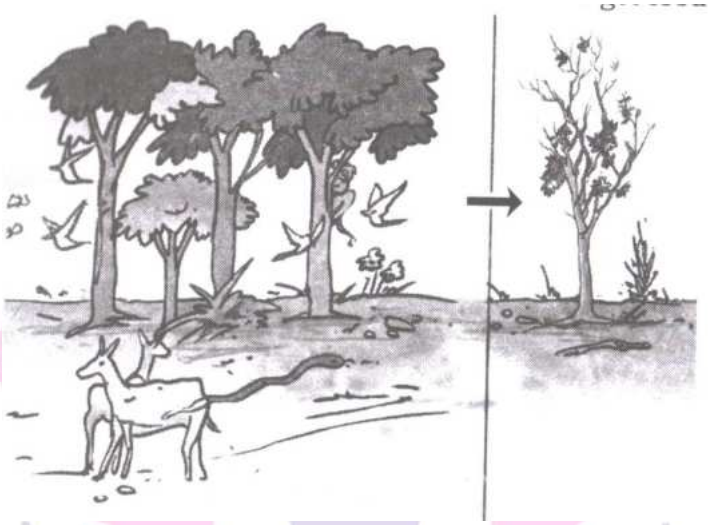


5. What would happen if forests disappear?

i) If forests disappear, the amount of carbon dioxide in air will increase. Result in the increase of global temperature and suffocating atmosphere.



ii) In the absence of trees and plants, the animals will not get good and shelter



iii) In the absence of trees, the soil will not hold water which will cause floods and erosions.

iv) Deforestation will endanger our life and environment

6. How do forests help in controlling floods and maintain steady supply of water?

The uppermost layer of the forest canopy intercepts the flow of rain drops and most of the water comes down through the branches and the stems of the trees. From leaves it drips slowly over branches of the shrubs and herbs. All this slows down the speed of raindrops and also slows down speed of running water.

Thus, forests act as a natural absorber of rainwater and allows it to seep. It helps to maintain the water table throughout the year. In this way, forests help in controlling floods and maintain steady supply of water.

7. Indicate the points which should be keep in mind to make forest visit more advantageous.

i) You should have permission to go inside the forest

ii) A record should be prepared for things which you do or observe

iii) Record the bird calls

iv)Make sure that you can find your way in the forest

v)Learn to recognise animals dropping

vii)Interview forest officials and the people of surroundings village.

III. Long Answer Type Question.

1. Give any four factors which are responsible for the destruction of forests.

(a) Construction of roads.

(b) Construction of buildings.

(c) Industrial development.

(d) Increasing demand of wood.

2. All the needs of animals living in a forest are fulfilled. Justify this statement in a few sentences.

Forest provides home (shelter) to the animals living there. It is a natural habitat to a variety of animal species. Animals get food and water from forest. Some animals are herbivorous which eat plants to survive. Through transpiration, forest makes it possible for water vapour to reach the atmosphere in large quantities and leads to rain. Thus, provide water to the animals.

3. Explain how animals dwelling in the forest help it grow and regenerate.

The animals in forests are of various types. These could be herbivores, carnivores, microorganisms, etc. These play an important role in maintaining the food chains.

(a)Microorganisms convert the dead plants and animals to humus. This humus helps in returning the nutrients back to the soil. These are absorbed by plants.

(b)The animals also help in dispersing the seeds of certain plants.

(c)The decaying animal dung provides nutrients to various types of seedlings to grow.

All these activities of animals dwelling in the forest help it to grow and regenerate.

4. Explain how forests prevent floods.

Forest acts as a natural absorber of water. It allows rain water to seep through. In the absence of trees, the rain water would hit the ground directly resulting in flood. However, because of the presence of trees, rain water does not hit the ground directly. It rather hits the ground slowly. Hence, before flooding, all the rain water seeps through ground. In this way, forests prevent floods.

5. What are decomposers? Name any two of them. What do they do in the forest?

Decomposers are microorganisms that convert the dead plants and animals to humus. Bacteria and fungi are the two types of decomposers. They help in the process of recycling of nutrients by decomposing various dead organisms such as plants and animals to form humus.

6. Explain why there is no water in a forest.

Forests have organisms, called decomposers, which degrade the forest organic waste, i.e., dead plant parts, animal excreta and animal dead bodies. The decomposed organic material mixes in the soil and increases its fertility. Therefore, forests do not have wastes.

7. Why should we worry about the conditions and issues related to forests far from us?

There are various reasons for which we should be vigilant about matters related to forests.

(a)A decrease various reasons for which we should be vigilant about matters related to forests.

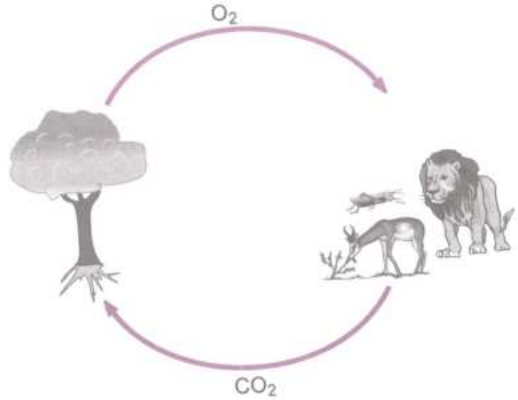
(b)Soil erosion would occur if there are no forests.

(c)Floods would be more frequent in absence of forests.

(d)Forests provide shelter and food to animals. When forests are adversely affected, Therefore, We need to conserve our forests.

8. Explain the role of forest in maintaining the balance between oxygen and carbon dioxide in the atmosphere.

Forests are called the green lungs. This is because plants in forests release oxygen through the process of photosynthesis and help in providing oxygen to animals for respiration. Plants consume carbon dioxide released by the animals. In this way, plants help in maintaining a balance of oxygen and carbon dioxide in atmosphere.



I. High Order Thinking Skills (Hots) Question.

1. "You conserve forest, you conserve soil." Do you agree? Justify.

Yes, forests find soil with root and prevent soil erosion, they also maintain fertility of soil and check flood.

II. High Order Thinking Skills (Hots) Question.

1. Why are planted alongside the roads?

Trees absorb the noise of the vehicles on roads and reduce noise pollution. Therefore, trees are planted alongside the roads.

2. Why are forests called 'green lungs'?

As forests are covered with green trees and bushes which maintain the balance of oxygen and carbon dioxide in the atmosphere, they are called 'green lungs'

3. Why is energy lost at every step of a food chain?

Energy is lost at each link of the food chain due to(i) food that cannot be digested and is passed out of the organism and (ii) energy that I used up by the organism for carrying out its activities.

Value Based Question

1. a .What is deforestation?

b. How is deforestation affect wild animals and human being?

a.Deforestation: The cutting down of trees for commercial purposes is called deforestation.

b. Deforestation affects wild animals and human beings –

2. In absence of plants, the animals will not get food and shelter. 2. In absence of plants , carbon dioxide in air will increase resulting in increase in earth's temperature. 3. In absence of plants, soil will not hold water, which will cause floods. 4. Deforestation will endanger our life and environment.

Skill Based Questions

1. Observe the following figure and answer the following questions

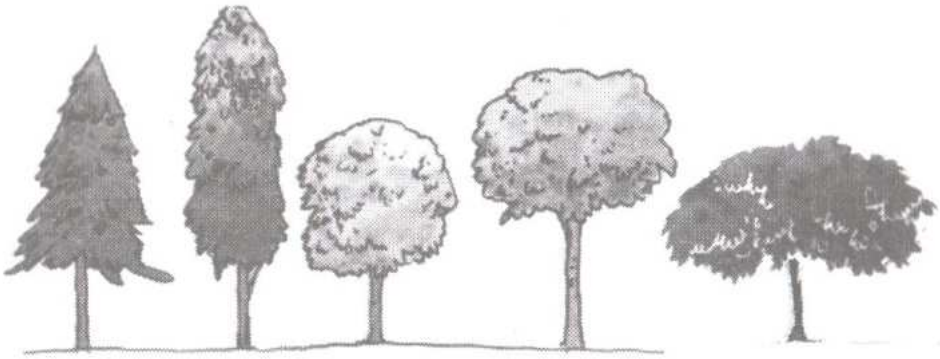
i) Identify the figure

ii)Name the animal found in it.

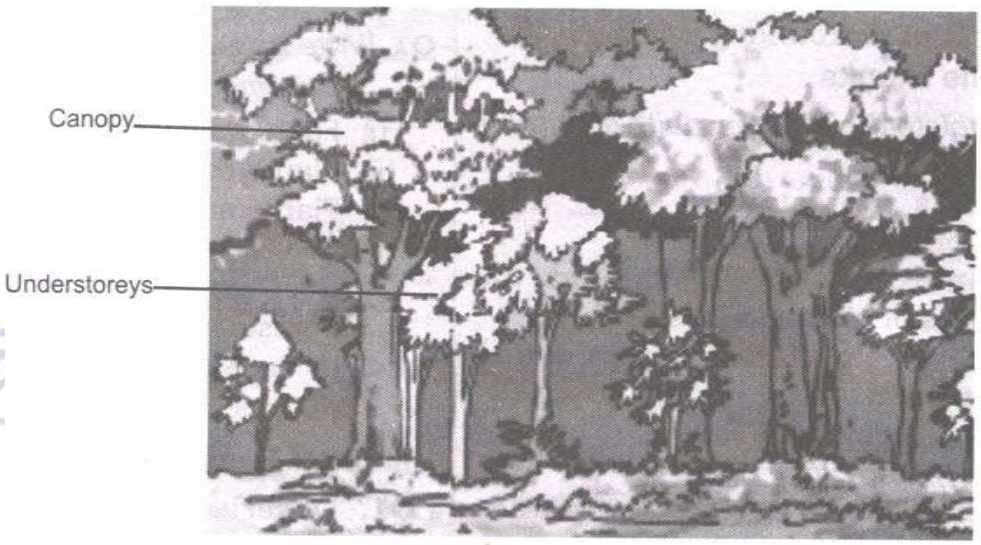
i)This figure shows forest as habitat of various types of animal

ii) There are some animals in this figure like ape, monkey and jackal

2. Draw a diagram to show different types of crowns of different trees.



3. Draw a diagram to show canopy and understoreys.

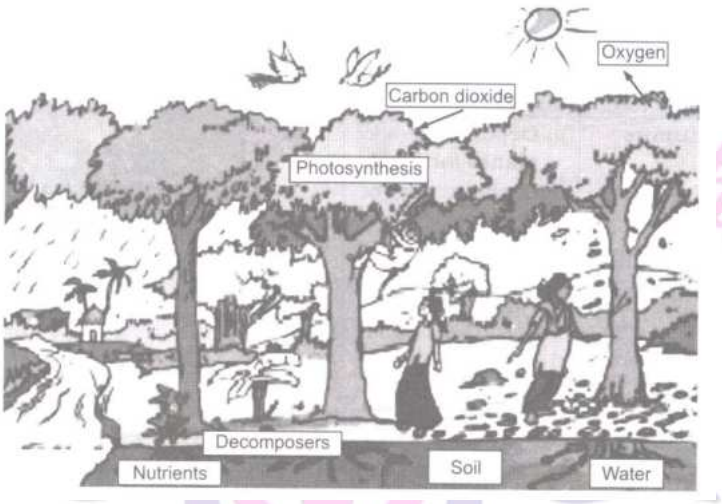


4. Draw a diagram of a forest to show its various components. Label the following :

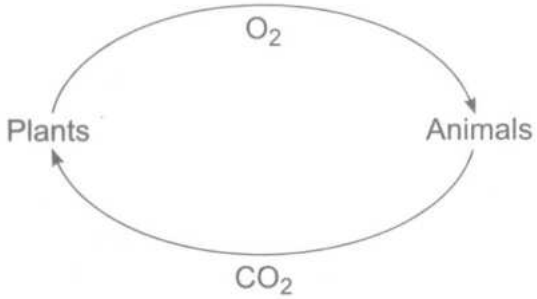
i) Oxygen ii) Carbon dioxide iii) Photosynthesis

iv) Nutrients v) Decomposers vi) Soil

vii) Water



5. Draw a ray diagram to show the balance of oxygen and carbon dioxide



6. Draw a diagram of forests in which some animals also walking.

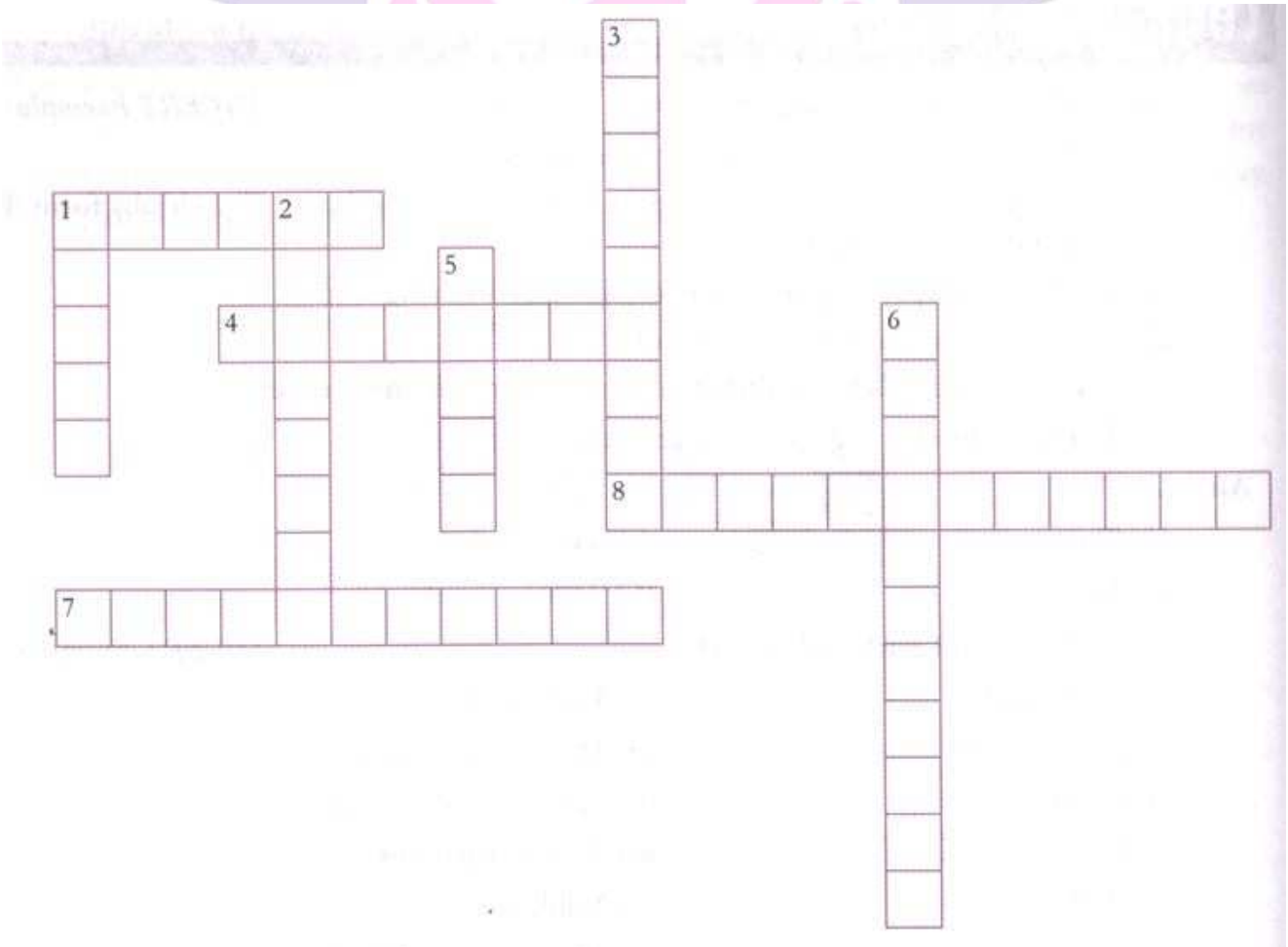
7. Draw a diagram of forest which contains following types of trees:

i) Neem ii) Sheesham iii) Semal iv) Bamboo

Neem Sheesham Semal Bamboo

Crossword Puzzle

1. Solve the crossword puzzle with the clues given below.



Across

1. Branches of all trees look like a roof on the other plants in the forest
4. One who uses a product
7. The vegetation that grows under the shade of the canopy
8. Organisms that depend on plants for their food

Down

1. The branchy part of a tree above the stem
2. The plans which produce their own food
3. Organisms that can make their own food
4. The rotting dead matter in the soil
5. Microorganisms which convert dead and decaying plants and animals to humus

Across

1. Canopy
4. Consumer
6. Understorey
8. Heterotrophs

Down

1. Crown
2. Producer
3. Autotroph
5. Humus
6. Decomposers