

## Chapter 17: Forests : Our Lifeline

### Multiple Choice Questions

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1. (c)      2. (a)

### EXERCISE

#### A. Tick (✓) the correct options.

1. (c)      2. (b)      3. (c)      4. (d)      5. (a)  
6. (d)      7. (d)

#### B. Fill in the blanks.

1. sun      2. food web      3. vegetation      4. afforestation  
5. tribal

#### C. Very Short Answer Questions.

1. Forests cover approximately one-third of the earth's total land surface.  
2. On forest floor      3. Understorey layer      4. Canopy layer  
5. Carbon dioxide      6. Snake

#### D. Short Answer Type-I Questions.

1. A series of organisms linked together by the process of eating and being eaten for food is called a food chain.  
2. Decomposers are those organisms which feed upon the dead plant and animal tissues and convert them into a dark-coloured substance called humus.  
3. The forest's top layer consists of branches and leaves of tall trees. These branches overlap with each other and this layer is so dense that it allows very little sunlight to penetrate through it. So, there is dark inside the forests.  
4. The uppermost branches and leaves of all tall trees which act like a roof or umbrella over the smaller trees in the forest is called canopy.

#### E. Short Answer Type-II Questions.

1. Plants are beneficial to animals in the following ways:  
(a) Animals directly or indirectly depend on plants for food.

- (b) Tall trees give shelter to various animals.
  - (c) Plants produce oxygen during photosynthesis which is taken up by animals for respiration.
2. Some of the ways to conserve forests are given below:
    - (a) Excessive cutting down of forest trees should not be allowed by the government.
    - (b) 'Tree for a tree' principle should be adopted. For every tree that has been fallen, a new tree should be planted.
    - (c) Paper products such as old newspapers, magazines, books and notebooks, etc., should be recycled to conserve forests.
  3. Planting more and more trees to save the environment from the harmful effects of deforestation is called afforestation. It is our moral duty to conserve forests and protect our environment for the benefit of our future generations.
  4. Causes of deforestation :
    - (i) Forest fires: Once the forest fire starts, it does not stop easily and many trees are burnt causing deforestation.
    - (ii) Increase in population: With increasing population, more land is required. Forest area is cleared to obtain this land.
    - (iii) Construction of dams: A large forest area has to be cleared to construct a dam. This causes deforestation.

#### **F. Long Answer Questions.**

1. Harmful effects of deforestation are as follows:
  - (a) Deforestation causes soil erosion, leading to loss of soil fertility.
  - (b) It causes change in the rainfall pattern and results in drought.
  - (c) Burning of wood, obtained from deforestation, causes increase in the concentration of carbon dioxide in the atmosphere. Excess of carbon dioxide causes air pollution. Carbon dioxide is a greenhouse gas and causes global warming (increase in the earth's temperature).
  - (d) In the absence of trees of the forest, the rainwater flows faster causing flood conditions.
  - (e) By deforestation, climate becomes warmer and drier in the absence of humidity in the deforested area.
  - (f) In the absence of trees and plants, the animals will not get food and shelter.
2. Forests are useful to us in many ways, such as –
  - (a) Forests are a good source of wood like teak, *sheesham*, rosewood and *sal* which are used in making furniture.
  - (b) Several plants that grow in forests are used in the preparation of medicines. The bark of *Cinchona* tree is source of a medicine called quinine which is used in treatment of malaria.

- (c) Forests maintain balance of gases in nature, maintain water cycle, prevent soil erosion.
- (d) Forests prevent floods, replenish groundwater, provide food and shelter to wildlife and help in reducing pollution.

**G. HOTS (Higher Order Thinking Skills) Questions.**

1. Recycling of paper helps in the conservation of forests because paper is made from wood which is obtained from forests. We need to cut trees for it. If paper is recycled, more trees will not be required to be cut.
2. Forests are called 'green lungs' because the forests help the atmosphere in the same way like the lungs. Forests help in exchange of gases taking in CO<sub>2</sub> and giving out O<sub>2</sub> whereas lungs also take the oxygen from the atmosphere, provide it to body parts, collect carbon dioxide and pass it out.

## Chapter 18: Wastewater Story

**Multiple Choice Questions**

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1. (b)
2. (c)

**Multiple Choice Questions**

**Page-185**

1. (a)
2. (a)

**EXERCISE**

**A. Tick (✓) the correct options.**

1. (b)
2. (c)
3. (c)
4. (b)
5. (b)
6. (b)
7. (a)

**B. Fill in the blanks.**

1. water pollution
2. manhole
3. Stagnant
4. urinate
5. liquid

**C. Very Short Answer Questions.**

1. Diarrhoea
2. Human faeces
3. In the landfill or incinerator
4. Screening
5. Spreading of diseases
6. Earthworms

**D. Short Answer Type-I Questions.**

1. When the clarified water is taken into secondary sedimentation tank and allowed to stand for several hours, the aerobic bacteria settle down at the bottom of the tank as 'activated sludge'. This way activated sludge is formed.
2. The speed of the incoming wastewater is slowed down to allow sand, grit and pebbles to settle down.
3. Methane, hydrogen, carbon dioxide, hydrogen sulphide are the four gases present in biogas.
4. Sewage is a liquid waste. Most of it is water which contains dissolved and suspended impurities. These impurities are called contaminants.



### **E. Short Answer Type-II Questions.**

1. (a) Chemicals like insecticides should not be thrown down the drains because they may kill the useful microbes that help to decompose the wastes present in the sewage and purify water.  
(b) Sanitation at the public places can be maintained by the following ways:
  - (i) We should not scatter rubbish such as food wastes, empty plastic water bottles, etc., at public places.
  - (ii) We should never urinate on the roadside.
  - (iii) We should cover the open drains.
2. (a) The place where the process of sewage treatment is conducted is called sewage treatment plant or wastewater treatment plant. Sewage treatment is the process of removing pollutants or contaminants from the sewage to make it harmless.  
(b) The sewage entering the sewage treatment plant is first passed through bar screens. The bar screens remove the large objects like rags, sticks, cans and plastic packets from the sewage. The solid waste collected here is later disposed in the landfill or is incinerated.

### **F. Long Answer Questions.**

1. The main steps used in sewage treatment are:
  - (a) Primary treatment
    - (i) Screening
    - (ii) Grit removal
    - (iii) Primary sedimentation
  - (b) Secondary treatment
    - (i) Aeration
    - (ii) Secondary sedimentation
  - (c) Tertiary treatment  
(treatment with ozone, chlorine)  
After this whole treatment, water is discharged into a sea, a river or into ground.
2. (a) Manholes are provided at every 50 metres to 60 metres distance in the sewerage, at the junction of two or more sewers and at points where there is a change in the direction of sewer line. If there is any leakage or blockage in the underground sewer pipeline, the sanitary worker can go down to the sewer pipeline for cleaning or any repair.  
(b) Saving life of someone