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15

READING WITH UNDERSTANDING (Thimmakka and Biomedical Waste Management)

This lesson delves into the inspiring story of Thimakka and explores the critical topic of biomedical waste management. Thimakka, an environmentalist from India, has left an indelible mark with her remarkable efforts in tree plantation. Born in Karnataka, Thimakka, along with her husband, began planting banyan trees in the 1950s, despite facing numerous challenges. Over the years, her commitment to environmental conservation has resulted in an astounding legacy of hundreds of trees, earning her widespread recognition.

We will draw inspiration from her story as we shift our focus to the crucial aspect of biomedical waste management, understanding its significance in preserving both public health and the environment. Biomedical waste encompasses materials that, due to their biological nature, pose potential threats to human health and the environment if not handled appropriately.

Through this dual exploration of Thimakka's environmental legacy and biomedical waste management, we aim not only to gain knowledge but also to cultivate a sense of responsibility towards our environment.



LEARNING OUTCOMES

After studying this lesson, the learner:

- Analyses and evaluates different passages written in English;
- Interprets short theme-based passages by close reading, and answers questions on those passages.

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15.1 THIMMAKKA

Thimmakka and her husband Bikkalu Chikkaiah, a childless couple of Hulikal village in Karnataka, decided to adopt children. But the children they chose to rear were 284 banyan trees along a 3 km stretch of what is now National Highway 48 in Karnataka. The trees filled up a void in their lives. And just recently, Thimmakka received the National Citizens Award (for social forestry) from the Prime Minister.

In the 1950s, it was a Thimmakka, who tired of her neighbour's jibes directed at her childlessness, hit upon the plan. "Why not plant banyan trees and rear them like our children?" she thought. So the lonely couple decided to plant trees. Thimmakka's husband was a disabled person, hence she had to work as a labourer every day and did not have the time for much else. But firm in their resolve, they took great pains to dig pits on either side of the road. Their next task was to choose suitable banyan saplings. They finally planted 300 saplings and put up thorny bushes around, to ensure that the cattle did not eat up the tender trees.

Thimmakka brought water in pots from a long distance and poured it at the foot of the saplings every day. During the rainy season she poked at the roots of the trees to make them go deep and, as the area was not fenced, she kept a constant vigil and nursed the plants for 10 years. It was time spent well, as it gave her fulfilment and pride. Even as the couple nursed the saplings, she was working in a quarry for their hand-to-mouth existence. If she could not go to the quarry they would have nothing to eat that day. True, her work was back-breaking, but she could not neglect the trees either. She would go to the Kudur road and attend to the saplings before the break of dawn. And the trees, like children who live in an atmosphere of love and caring, responded to her call and grew up. Now in the prime of their lives, the 284 that took root provide a green canopy for 3 km, nests for birds and prevent soil erosion. They are also worth an estimated Rs. 85 crore.



INTEXT QUESTIONS 15.1

1. Choose and tick the correct answer:
 - a) The couple look after the saplings because:
 - i. they earned money from it
 - ii. it gave them happiness and satisfaction



- iii. it would get them an award
- b) The trees provided:
- i. employment to some people
 - ii. food for the animals
 - iii. shade along the 3 km stretch of road.
2. Select the correct information from the box and write it in the blanks:
- | | | |
|-------|-----|-----|
| 1950s | 10 | 284 |
| 3 km | 300 | 85 |
- a) Trees were planted along a _____ stretch of road.
 - b) The trees were planted in the _____.
 - c) Thimmakka planted _____ saplings.
 - d) They looked after the trees for _____ years.
 - e) _____ trees grew along the National Highway.
 - f) The approximate cost of the trees are _____ crores.
3. Answer the following questions:
- a) Why did Thimakka receive the National Citizens Award?
 - b) What made Thimmakka and her husband decide to plant banyan trees along the highway?
 - c) What did Thimmakka do to ensure the safety of the plants?
4. Complete the sentences:
- a) To take good care of the saplings after ensuring their safety Thimmakka had to:
 - (i) _____
 - (ii) _____
 - (iii) _____



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- b) Thimmakka's banyan trees have benefited the environment by:
- (i) _____
 - (ii) _____
 - (iii) _____

5. Find a word in the passage which means 'a cover'.

15.2 BIOMEDICAL WASTE MANAGEMENT

An important solid waste which is noteworthy is biomedical waste. This waste includes anatomical waste, syringes, gauze, absorbents, glass, etc. The huge dumps of biomedical wastes disposed of by hospitals and clinics cause serious health problems. It is not uncommon that in some places, these biochemical wastes rot either in front of clinics or in street corners. Rag-pickers, mostly children, pick up these wastes by hand and are vulnerable to attack by the hepatitis virus (jaundice causing virus) and other dangerous viruses. Ordinances have been promulgated not to dump the waste and for safe transportation in special containers, and subsequent incineration in Australia and other countries.

Why are solid wastes cause for such serious concern? The dumping of solid wastes spoils the beauty of cities and towns and causes health problems.

The garbage mountains become breeding grounds for disease-carrying vectors such as flies, mosquitoes, rats and cockroaches. Reports indicate that about 8,00,000 flies can be produced in one cubic metre of garbage. The flies, which carry pathogenic organisms, cause diseases such as dysentery, diarrhoea, etc. Rats, which are carriers of insects and other bio-organisms, are responsible for causing plague as was recently witnessed in Surat in 1994. It is reported that about 25 human diseases are associated with the solid wastes. Accumulation of litter refuse and junk poses fire hazards and may lead to accidents too.

The accumulation of solid waste is a mounting problem with no easy solution in sight. Unlike other types of pollution, preventive measures cannot be adopted in this case. Several solutions to the disposal problem have been proposed. The present mode of management is to collect the refuse from various parts of the city, transport it to a remote place, where it is incinerated or composted or simply dumped again. The most easy solution is to recycle or reuse the waste. This solves the disposal of wastes and also yields revenue besides compensating for the expenditure incurred on its collection and transportation.



INTEXT QUESTIONS 15.2

1. Tick True (T) or False (F) against the following statements:
 - a) Nearly 25 human diseases are caused by accumulating garbage.
 - b) Preventive steps can be taken to reduce accumulating garbage.
 - c) Recycling and reusing of garbage can bring revenue.
 - d) Flies are carriers of bio-organisms which cause plague.

2. Fill in the blanks in the following sentences using the information given in the passage:
 - a) Heaps of garbage can cause the breeding of _____.
 - b) One cubic metre of garbage can have _____ flies.
 - c) Diseases like _____ are caused by pathogenic organisms.
 - d) Fire hazard leading to accidents can be due to ____

3.
 - a) What does bio-medical waste consist of?
 - b) Who is more likely to be affected by the bio-medical waste?
 - c) A suitable title for the passage can be:
 - i. Garbage
 - ii. Garbage mountains-a nuisance.
 - iii. Protection from medical waste.
 - iv. Pathogenic organisms.

4. There is a serious concern about solid wastes because: (Tick all the correct answers)
 - a) They cause a lot of expenditure.
 - b) They spoil the beauty of the city.
 - c) They are a threat to health.
 - d) They bring revenue.

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ANSWERS TO INTEXT QUESTIONS

15.1

1. a) ii) it gave them happiness and satisfaction
b) iii) Shade along the 3 k.m. stretch of road
2. a) 3 km
b) 1950s
c) 300
d) 10
e) 284
f) 85
3. a) For planting 284 banyan trees along a 3 km stretch of a National Highway.
b) They didn't have children so they decided to adopt trees as their children.
c) put thorny bushes.
4. a) i. bring pots of water from a long distance
ii. poked at the roots during the rainy season.
iii. kept constant vigil/nursed them for 10 years.
b) i. providing a green canopy for 3 km.
ii. providing nests for birds.
iii. preventing soil erosion.
5. Canopy

15.2

1. a) True b) False c) True d) False.
2. a) disease carrying vectors.
b) 8,00,000
c) dysentery, diarrhoea
d) accumulation of litter, refuse and junk.
3. a) anatomical waste, syringes, gauze, absorbents, glass.
b) Rag pickers.
c) ii) Garbage mountains -a nuisance.
4. b, c