



INDIAN SCHOOL AL WADI AL KABIR



Class: VI	DEPARTMENT: SCIENCE-2021-2022	DATE: 13.02.2022
WORKSHEET NO: 14 WITH ANSWERS	TOPIC: GARBAGE IN, GARBAGE OUT	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

**I. VERY SHORT ANSWER TYPE QUESTIONS (1M):**

1. What are biodegradable wastes?  
[Hint: Those wastes that can be decomposed by microorganisms are known as biodegradable wastes.]
2. Give two examples for Non-biodegradable wastes.  
[Hint: Plastic and metals.]
3. The process of rotting and conversion of biodegradable waste into manure.  
[Hint: Composting]
4. Name the manure made from kitchen wastes.  
[Hint: Compost.]
5. What type of garbage is collected in green dustbins?  
[Hint: Biodegradable garbage like waste from kitchen, plants and animals.]
6. Sort the materials as biodegradable and non-biodegradable:  
Kitchen waste, glass lens, egg shell, plastic bottle, animal wastes, dried leaves, metal container.  
[Hint: Biodegradable: Kitchen waste, egg shell, animal wastes, dried leaves.  
Non – biodegradable: glass lens, plastic bottle, metal container.]
7. Name the organisms which are used in vermicomposting.  
[Hint: A type of earthworms called redworms]
8. Name an alternative for expensive chemical fertilizers and manures from the market to enrich agricultural fields.  
[Hint: Vermicompost]
9. Why do we consider plastic bags a curse for stray animals?  
[Hint: When stray animals look for food in these bags, they end up swallowing these and can result in their death.]
10. What do you do with the left-over food at home?  
[Hint: Left-over food at home along with other kitchen waste can be dumped into compost pit to convert them into manure.]

*For the questions that follows, two statements are given: - one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below:*

*i) Both A and R are true and R is the correct explanation of the assertion.*

*ii) Both A and R are true but R is not the correct explanation of the assertion.*

*iii) A is true but R is false.*

*iv) A is false but R is true.*

11. Assertion (A): After a landfill site is completely filled with garbage it is converted into a park and no building is allowed to be constructed for next 50 years.

Reason (R): Human habitat should be away from landfills to avoid harmful gases, diseases and dirty condition of landfills.

*i) Both A and R are true and R is the correct explanation of the assertion.*

12. Assertion (A): Compost making areas are developed near the landfill.

Reason (R): It is done to utilize some of the useful components of garbage.

*i) Both A and R are true and R is the correct explanation of the assertion.*

13. Assertion (A): Vermicomposting is done with the help of red worms.

Reason (R) : We can recycle paper to get useful products.

*ii) Both A and R are true but R is not the correct explanation of the assertion.*

## **II. PASSAGE BASED QUESTIONS:**

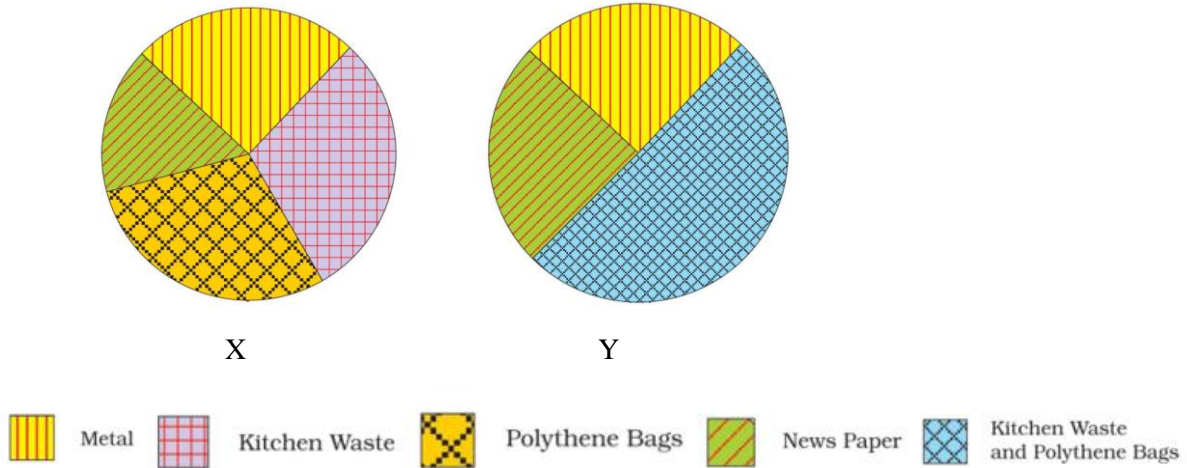
Read the given passage and answer the following questions.

Dig a pit of 30cm deep or keep a wooden box at a place, which is neither too hot nor too cold. Spread a net or chicken mesh or sand at the bottom of the pit. Spread some vegetable wastes over this layer. Sprinkle some water to make this layer wet. Do not press the layer of waste. Add redworms to the pit and cover them loosely with a gunny bag. Bury vegetable and fruit wastes inside the pit as food for worms. Once in a few days, gently mix and move the top layers of the pit. Observe the contents of the pit after 3-4 weeks. Do you see loose, soil like material in the pit?

- The given passage describes the various steps of:
  - Composting
  - Vermicomposting**
  - Paper recycling
  - Landfill
- The period required for the formation of vermicompost is:
  - About one month**
  - 2 weeks
  - Few days
  - 3-4 months
- Wastes that may contain salt, pickles, oil or vinegar should not be used to feed redworms, because:
  - these wastes are non-biodegradable.
  - redworms feed only on eggshells or sea shells.
  - disease causing microbes may start growing in the pit.**
  - redworms do not survive in moisture.
- Which among the following substance should not be used as a spread over sand or wire mesh in the pit?
  - dried animal dung
  - plastic coated paper**
  - husks or dried stalks of plants
  - pieces of newspaper or cardboard

### III. CASE STUDY BASED QUESTIONS

The Pie charts A and B shown in the given figure are based on waste segregation method adopted by two families X and Y respectively.



1. Which of the two families X or Y do you think is more environmental conscious and why?
  - a. X- There is more non-biodegradable waste.
  - b. Y- The kitchen waste and polythene bags are disposed together.
  - c. **X- The kitchen waste and polythene bags are disposed of separately.**
  - d. Y- There are equal proportions of biodegradable and non-biodegradable waste.
2. Sort out the garbage that should go to the blue dustbins provided by the municipality.
  - a. Metal, kitchen waste and polythene bags.
  - b. **Metal and polythene bags.**
  - c. Newspaper and kitchen waste.
  - d. Newspaper, kitchen waste and polythene bags.
3. Which of the two families should cut short wastage of newspaper? Suggest a suitable method to help them.
  - a. X - Use both sides of the paper to write.
  - b. Y - Use a slate for rough work.
  - c. X - Recycle paper.
  - d. **Both X and Y - All methods mentioned above.**

#### IV.a) SHORT ANSWER TYPE QUESTIONS: (2M)

1. Differentiate composting and vermicomposting?  
 [Hint: Composting:-Converting plant and animal waste including that from kitchen, into manure, is called composting. Vermicomposting: -Method of making compost from kitchen garbage using red worms is called vermicomposting.]
2. Burning or heating of plastics should be discouraged. Give reasons.  
 [Hint: All kinds of plastics give out harmful gases, upon heating or burning. These gases may cause many health problems, including cancer, in humans.]

3. What are the different methods of garbage disposal?  
[Hint: There are different methods of disposal of garbage depending on the nature of garbage. Some of the effective measures are composting, vermicomposting, landfill, recycling and reuse.]
4. Why are earthworms known as farmer's friends?  
[Hint: Earthworms dig burrows in soil and make it airy. They increase the fertility of the soil.]
5. Why should we avoid throwing plastic bags carelessly on roads and other places?  
[Hint: The plastic bags can get into drains and sewer system. As a result, drains get choked and water spills on the roads.]

#### **IVb) SHORT ANSWER TYPE QUESTIONS: (3M)**

1. How is compost prepared from kitchen waste?  
[Hint: The kitchen wastes generally include vegetable and fruit peels, egg shells, waste food, tea leaves etc., which are completely biodegradable. Put these waste into a pit and cover them with soil. After some days, we observe that they are completely degraded. Take them out of the pit and this final form of the wastes, mixed with soil, is called compost.]
2. Is it better to use compost instead of chemical fertilisers? Why?  
[Hint: Yes, it is better to use compost instead of chemical fertilizers, due to the following reasons:  
i)It is easy to prepare compost.  
ii)Compost is environment friendly as it does not cause any health issues in humans and animals.  
iii)Compost does not cause pollution.  
iv)Compost increases soil fertility.  
v)Compost is biodegradable.]
3. What are the different ways of dealing with garbage?  
[Hint: Garbage has both useful and non-useful components. So, it has to be sorted first. Useful components that can be recycled (like plastic, metal) are separated for recycling. Useful components that can be decomposed (like paper, food) is separated for composting. Non-useful components are separated out for the landfill.]
4. What is landfill? How is it done?  
[Hint: Landfill is a low-lying open area where the garbage collected from a city or town is dumped. The waste is then compacted with compactor. It is covered with a layer of soil and another layer of trash is added and compacted. The process is repeated till the landfill is full. The area is later converted into a park or playground.]

#### **V. LONG ANSWER TYPE QUESTIONS. (5M)**

1. Suggest measures to minimize the over use of plastics and deal with garbage?  
[Hint: We can make our family, friends and others to follow proper practices for disposing different kinds of wastes.  
i) Make a minimum use of plastic bags or reuse the bags.  
ii) Insist shopkeepers to use paper bags and carry a cloth or a jute bag for shopping.  
iii) Do not store eatables in plastic bags.  
iv) Never burn plastic bags and other plastic items.  
v) Do not put garbage in plastic bags and throw it away.]

2. What are the four Rs of waste disposal? Explain each in a sentence.

[Hint: The four Rs of waste disposal are:

- (i) Refuse: Say no to the non-biodegradable wastes such as plastic bags, packaging cans, metal wastes, etc.
- (ii) Reduce: Decreasing the wastes by consuming less and throwing less.
- (iii) Reuse: Instead of throwing the substances as waste, reuse them wherever possible.
- (iv) Recycle: The process of converting waste materials into new products is called recycling.]

3. Describe the process of vermicomposting.

- [Hint: i) Take a large wooden box or dig a pit of 30 cm deep  
ii) Spread a net or fine chicken mesh or sand at the bottom of the box.  
iii) Spread biodegradable waste and on top of it spread a layer of soil.  
iv) Sprinkle water to make the layer moist.  
v) Place some red worms in the pit.  
vi) Add vegetable and fruit waste to feed the redworms.  
vii) Mix and move the top layer of the pit frequently.  
viii) Compost will be ready after 3-4 weeks.]

4. Explain the steps involved in recycling of paper.

[Hint: The steps involved in recycling paper are as follows:

- i) Tear paper into small pieces.
- ii) Soak these pieces in water for a day.
- iii) Make a thick paste and spread it on a net or a sieve.
- iv) Let water drain off completely.
- v) Use an old cloth or newspaper to soak up the extra water.
- vi) Remove the layer of paste from the frame, spread it on a sheet of newspaper in the sun.]

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