

Environmental Studies Part - 1

Part One

1

The Life Cycle of Animals

(Grade Me pg.no. 5 - 7)

1. Complete the sentences orally:

Ans. (1) eggs (2) eggs (3) environment *(4) eggs *(5) caterpillar
(6) chrysalis (7) adult

2. Say whether the following statements are True or False:

Ans. (1) False (2) False (3) False (4) True (5) True *(6) False *(7) True
*(8) False

3. Answer the in 2- 3 sentences of the following:

Ans. (1) When a hen sits on the eggs to warm them, she is said to be hatching the eggs.

(2) Dogs, cats, goats, cows, etc. are some animals that give birth to their young ones.

*(3) Chicks need warmth to grow inside the egg. So, the hen must sit on her eggs to warm them.

(4) In some animals, the young one grows into an adult that looks very different from the young one. This change of form is called metamorphosis.

*(5) The four stages in the life cycle of a butterfly are :
(1) Egg (2) Larva (caterpillar) (3) Pupa (chrysalis) (4) Adult (butterfly)

(6) To shed the old skin and to make way for new growth is called moulting.

(7) The Plain Tiger caterpillar moults four times. It remains in the caterpillar stage for ten to twelve days.

*(8) Many important changes take place inside the chrysalis. Its legs grow longer. It gets attractive wings. Most importantly its growth is completed inside the chrysalis and soon an adult butterfly emerges from it.

4. Give scientific reasons :

Ans. *(1) When a hen is hatching her eggs, she fears for their safety. So, she becomes aggressive and attacks anyone who tries to go near the eggs.

- (2) When the caterpillar comes out of the egg, it is very hungry. It begins to nibble the very leaf on which it has emerged. It eats very fast. So, its growth is very rapid.
- (3) A caterpillar grows rapidly in the first two or three days. So, it does not fit in its skin anymore. A new loose skin is formed on the growing caterpillar under the old skin and soon it sheds its old skin.
- (4) A caterpillar might have emerged from the eggs laid on these leaves. It might have nibbled at them and made holes in it.
5. Identify the stages of the life cycle of a butterfly:
- Ans. (1) egg (2) larva (3) pupa (4) adult



2 The Inter-relationships between Living Things

(Grade Me Pg.no. 8 - 13)

1. Complete the sentences orally:

- Ans. (1) food, water, air (2) deer, neelgai, bison (3) needs
 *(4) pesticides (5) arboreal (6) rainy season *(7) rainy season
 *(8) Paangal

2. Say whether the following statements are True or False:

- Ans. (1) False *(2) True (3) False (4) False (5) True (6) True

3. Name the following:

- Ans. (1) Tiger (2) Lamb *(3) Mohur (4) Paangal

4. Find the odd man out:

- Ans. (1) shelter (2) cotton (3) goat (4) watermelon

5. Answer the following in 2-3 sentences of the following:

- Ans. (1) Winter, summer and rainy season.
- (2) Paangal means falling of leaves. Many trees shed their leaves in winter. So, winter in Maharashtra is also called the season of Paangal.
- (3) The coats of many furry animals become thicker in winter. This keeps them warm during winter.

- (4) Konkan in Maharashtra is famous for mangoes.
- *(5) At the beginning of March, the trees grow new leaves.
- (6) In the rainy season, there is greenery all around. We see rainbows and frogs. Crops grow abundantly in the fields.
- *(7) We get silk from silkworm.
- *(8) If termites make a tree hollow, it breaks.

6. Answer in brief:

- Ans. (1) Everybody has different need. For example, every living thing needs water to survive but an elephant and a sparrow will not drink the same amount of water. A tiger lives in a cave, but a honeybee lives in a honeycomb. A cow eats grass, but a cat eats mice and drinks milk.

- (2) Some animals are useful to us. Animals like donkeys carry burden. Horses and bulls draw carts. Bulls also help on the farm. Dogs guard our house. Sheep gives us wool. Cows and buffaloes give milk. Hens give meat and eggs.

- *(3) Plants are useful to us in many ways. They give us food grains, vegetables, fruits, flowers, wood, medicine, cotton wool, etc. Plants give us many things to satisfy our needs.

- (4) As plants are useful to us, we must make sure that they get sufficient water and manure when necessary. We must spray pesticides if they are attacked by insects.

- *(5) Arboreal animals are animals like monkeys and squirrels which live on trees.

- (6) Arboreal animals help in growing new trees by scattering the seeds of the fruit they have eaten while moving from here to there. These seeds develop into new trees.

7. Give scientific reasons:

- Ans. (1) At the beginning of summer, many trees grow new leaves. These leaves are reddish and shiny when they are tender. So, the forests appear to have taken a copper colour.
- *(2) In the rainy season, when it becomes damp, the frogs come out. Otherwise they go under the ground for a period of slumber for seven to eight months.

(3) Animals like monkeys and squirrels get the advantage of being at a height. They can satisfy their hunger by eating the fruits of trees and can also keep a safe distance from their enemies.

*(4) We need water for growing crops. Less rain means less water, so we do not get a good crop.

*(5) Only aquatic plants grow well in marshy lands as they need excess water. The other plants start rotting as they do not need the excess water.

*(6) The Indian rat snake (dhaman) eats the rats. So, it lives round fields where there are lots of rats.

***8. Write down any two uses of leaves given below:**

Ans. (1) Leaves of betelvine are used as medicine. (2) In ancient times, Palas was used as medicine. (3) Leaves of fennugreek are used as a vegetable. (4) Adulsa is used as medicine. (5) The curry leaves are used for cooking.

***9. "A living thing will be found only where all its needs are fulfilled." Explain this statement with the help of an example from the textbook.**

Ans. A living thing will live in an area where all its needs are fulfilled. For example, a tiger inhabits in a grassland. It needs a waterhole nearby which never dries. It should be a hilly area where it can find caves for shelter.

10. Put the fruits in their respective seasons:

Ans.	Summer	Rainy
	mangoes, watermelons cashew nuts,	jackfruits, jammuns, karavandas

11. What will you do when:

Ans. *(1) Gurpreet has to protect herself from the heat by wearing cotton clothes and by applying a sunscreen lotion. She should also drink lots of water. (2) I will wear woollen clothes such as sweater, socks, muffler, etc. (3) I will ask somebody to water my plants or I will fill a plastic bottle with water. I will make a tiny hole in the bottle and keep it above the pot.

***12. Carry out the following experiment and answer the following:**

Ans. *(1) rain (2) reservoirs (3) Alpadi (4) masonry (5) dams (6) Panpoi



3 Storage of Water

(Grade Me pg.no. 14 - 17)

1. Complete the sentences orally:

Ans. *(1) rain (2) reservoirs (3) Alpadi (4) masonry (5) dams

2. Match the following:

Ans. (1) Drinking water (2) Ujni (3) Aad (4) Pohra (5) Houd

3. Answer the following in 2-3 sentences of the following:

Ans. (1) The rainy season lasts for three to four months. (2) Some rainwater seeps into the ground. Wells are dug to obtain this water. (3) The forts have reservoirs and tanks are dug into the stone. (4) The water was drawn from Aad using a small pot (pohra) tied to a rope. (5) When the tap-water system was introduced, the draw-wells went out of use. (6) Reservoirs are built in areas of low rainfall to store water. (7) Jayakwadi, Koyna, Ujni and Yeldari are the dams located in Maharashtra.

4. Give scientific reasons:

Ans. *(1) We get water from the rains. The rainy season lasts for three to four months. But all living things need water all year around. If we do not store water, we will not have enough water to fulfil our needs for the entire year. So, we must save water and use it economically.

- (2) Wells were dug to reach the water under the ground. But it was not possible to draw deep-seated groundwater. We can draw deep-seated water only by digging borewells and by electric pumps. Therefore, borewells are preferred to traditional wells.
- (3) People travelling by roads need water when they are thirsty. So, in some places, big clay jars of drinking water are kept for the use of such people.
- (4) Dams make it possible for us to store huge quantities of water. It also helps to bring more land under cultivation. Cities develop

near the dams. Dams makes it possible for us to set up factories and generate electricity. So, dams are important to human life.

*5. Answer in brief

Ans. (1) Brass, copper and earthen pots were used to store water. These were the traditional ways of storing water.

(2) Dams are built across rivers, lakes and streams.

(3) Water is a natural resource. All living things need it. Water is very precious and scarce. So while using it, we should keep in mind that we should not waste it.

(4) Water pollution is the contamination of water bodies, i.e. lakes, rivers, oceans, etc.

6. Differentiate between the traditional and modern methods of water storage.

Ans.	Traditional Methods	Modern Methods
(i)	Traditional methods were used in old days.	(i) Modern methods are used today.
(ii)	For example, wells, draw-wells, rivers and bunds, old reservoirs, old tanks.	(ii) For example, dams, borewells.
(iii)	Today, they are rarely used. Their remains are found in the same place.	(iii) Today, they are widely used.

7. Colour the box against the actions that cause water contamination or wastage. Colour the box blue that contain suggestion for conserving water:

- | | |
|---|-------------------------------------|
| (1) Washing clothes at the river bank. | <input checked="" type="checkbox"/> |
| (2) Watering plants using a sprinkler. | <input checked="" type="checkbox"/> |
| (3) Throwing water at others. | <input checked="" type="checkbox"/> |
| (4) Collecting rain water. | <input checked="" type="checkbox"/> |
| (5) Closing the tap after the bucket is full. | <input checked="" type="checkbox"/> |
| (6) Keeping the tap running while brushing one's teeth. | <input checked="" type="checkbox"/> |



4 Water Safe for Drinking

(Grade Me pg. no. 18 - 21)

1. Complete the sentences orally:

Ans. *(1) dissolve *(2) solution *(3) rehydration *(4) muddy *(5) diseases (6) lighter, heavier *(7) alum (8) pure (9) diarrhoea, gastritis.

*2. Say whether the following statements are True or False:

Ans. (1) False (2) False (3) True (4) False (5) True

3. Explain the terms:

Ans. (1) When a substance dissolves in water, a mixture of that substance and water is called a solution.

(2) The process of allowing heavier particles to settle at the bottom of still water is called settling.

(3) Drinkable water that does not endanger our health in any way is called potable water.

(4) A living thing that cannot be seen by the naked eye or a magnifying glass is called a micro-organism.

(5) An instrument for looking at very, tiny things which we cannot see with our naked eyes or even through a magnifying glass.

4. Answer the following in 2-3 sentences of the following:

Ans. (1) ORS or Oral Rehydration Solution is the solution of salt and sugar in water. It is given to a person getting loose motions.

(2) Saline is a solution of salt and water. It is given to patients in the hospital. Sometimes, medicines are given through saline.

*(3) A plastic ruler, a pencil, a rubber band, plastic spoon, leaves, groundnut, shells, stapler, orange, paper, ice cream stick and pen, twigs and leaves.

*(4) Eraser, sharpener, steel spoon, nail, screw, stones, coins, compass, soil, pin, clay ball.

(5) When you swirl alum in water, the heavy soil particles of the muddy water settles down.

*(6) Oil floats on water.

* (7) The substances used to make a lemon sherbet are: (a) lemon (b) salt (c) sugar (d) water

* (8) While making a sherbet, we stir the juice to make the sugar dissolve quickly.

* (9) Use a fine sieve that allows rava to pass through it, so that the sago pearls remain on the sieve thereby separating the mixture of sago and rava.

3. Give scientific reasons:

Ans. * (1) Water that looks clean and transparent may not be fit for drinking because micro-organisms may be present in it, which we cannot see with our naked eyes.

(2) Boiling water kills micro-organisms in it and makes it safe for drinking. It prevents disease. So, we must boil the water.

(3) Swirling alum in water helps the heavy soil particles in muddy water to settle down.

6. Classify the following items into their respective columns depending on whether they dissolve or do not dissolve in water.

Ans. Soil, sugar, pencil, rubber, washing soda, turmeric powder, ink, coffee powder, talcum powder, salt

Dissolve in water	Do not dissolve in water
sugar, washing soda	soil, pencil, rubber, turmeric
salt, ink, coffee powder	powder, talcum powder



5 Water for Every Household

(Grade Me Pg.no. 22 - 25)

1. Complete the sentences orally:

Ans. (1) water (2) contaminated (3) covered (4) sources (5) pumps (6) tankers

2. Find the odd one out:

Ans. (1) Ocean: Ocean water is not potable as it is salty.

(2) Plastic bottle is the modern way to carry water and store it.

(3) Pumps: It is used to lift the water.

(4) Sleeping: Water is not required for this activity.

* 3. Say whether the following are right or wrong:

Ans. * (1) Wrong * (2) Right * (3) Wrong * (4) Right (5) Wrong (6) Wrong (7) Right

4. Answer the following in one sentence:

Ans. (1) In earlier days, water was stored in brass, copper and earthen pots.

(2) Nowadays, steel or plastic containers are used to store water.

(3) We use potable water for drinking.

(4) Large cement or plastic tanks are installed on the roofs of big buildings.

(5) Lakes, rivers, reservoirs are our sources of water.

(6) Purification of water means making it safe for drinking.

(7) Distribution of water means arrangements made for distribution of water all over the town or city.

(8) Water is lifted upwards by using electric pumps.

(9) Water is supplied to remote areas by tankers that do not have a pipeline to supply the water.

5. Answer in detail:

Ans. (1) (i) I will keep the drinking water container covered to prevent dust particles from entering it. (ii) I will not dip my hands in the water. (iii) I will use a dipper to take the water and replace the lid at once. (iv) I will try to use a container with a tap. This makes it easier to take out the water and prevent contamination. (v) When the water in the container gets over, I will wash the container well before refilling it.

(2) (i) Large cement or plastic tanks are installed on the terrace of tall buildings. (ii) Water from this tank is piped to the kitchen, bathrooms and toilets of these buildings. (iii) Taps are fitted on these pipes. We can use the water and close the tap, according to our need. (iv) Thus, water can be obtained at several places in a building at the same time.

- (3) From the water source, water is brought through large pipes to a water purification centre. Then, water is stored in a water tower with the help of electric pumps. Arrangements are made to distribute this water all over the town or city.

6. What will happen if:

Ans. * (1) There will be wastage of food, ingredients used for cooking, water and even the gas used for cooking. We will need more water as we will use more utensils.

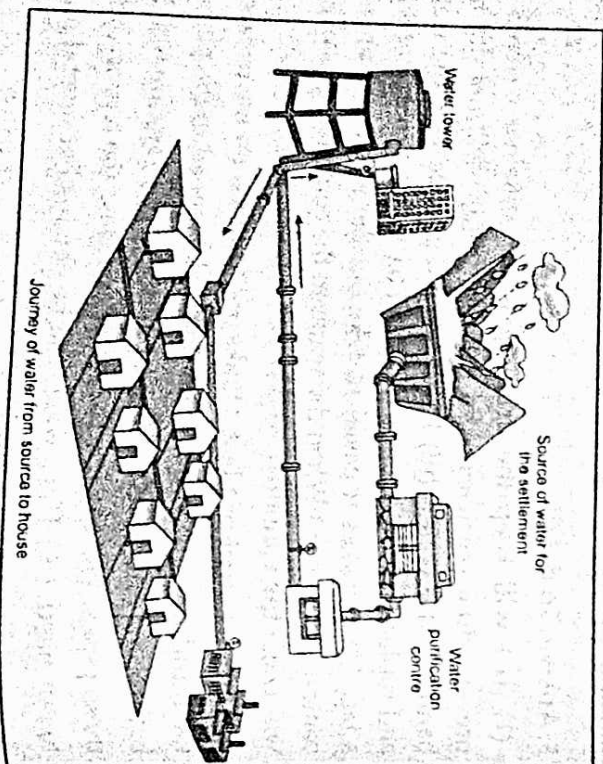
* (2) While carrying water from the river, lots of water will get spilled. Thus, water will be wasted. Collecting water will be a difficult task.

(3) I will store water in containers but I will make sure that none of this water is wasted.

(4) We will request local authorities to build a tank in our area.

(5) We will inform the local authorities about it. We will first purify the water before drinking it. We will take precautions so that diseases do not spread because of contamination.

7. Elaborate the journey of water from a water source to the taps in your house in the form of a flow chart.



8. What will you do when:

- * (1) We should call a plumber to repair the tap.
(2) I will not drink water without boiling it.



6 Variety in Food

(Grade Me pg. no. 26 - 30)

1. Complete the sentences orally:

Ans. (1) rainfall (2) sunlight, water (3) jowar (4) climate, soil (5) determine

2. Name the following

Ans. (1) Agriculture (2) Rice, Coconut (3) Wheat, Toor (4) Jowar, Bajra (5) Gujarat (6) Karnataka (7) Nagpur

3. Say the odd one out and give reason:

Ans. * (1) Mango: Because it is a fruit and rest are food items made out of mango.

* (2) Paratha: Because the other things are made from rice.

* (3) Mysore pak: because it is a sweet dish of Karnataka region while rest are dishes of Maharashtra.

(4) Laddu: Because the other things are made from jowar.

(5) Jowar: Grow in low rainfall region, while the others need heavy rainfall.

(6) Jowar: Grows in low rainfall region, while the others require moderate rains fall.

(7) Toor: Requires moderate rainfall, while the others require low rainfall.

4. Match the following:

Ans. (1) Jalgaon (2) Goa (3) Andhra Pradesh (4) Raigad (5) Solapur

5. Answer the following in 2-3 sentences of the following:

Ans. (1) Rice, coconut, ragi and varai are grown in regions of heavy rainfall.

(2) Jowar, bajra, moth, beans are grown in regions of less rainfall.

(3) Wheat, toor and soyabean are grown in regions of medium rainfall.

(4) Hurda, lahya, bhakari, ghugrya, papad, sandge, ambil, dhapale, dhurde are prepared from jowar.

*(5) Chapati, puris, parathas, etc. can be prepared from wheat.

*(6) Potato, parathas, *wandas* and *bhajiyas*, wafers, *chivda*, fingerchips, cutlets, etc.

*(7) The special food item prepared in my city is bataata wada. It is made from potatoes and grain flour.

6. Answer the brief:

Ans. (1) Growth of a crop depends on good seeds, fertile soil, sufficient sunlight and water, climate, etc.

(2) Every region has different climatic conditions. So, different crops grow in different regions. The main crop of the region forms the important part of diet of the people living in that region. For example, Konkarn is on a coastal area. So, rice is the main crop of that region. Therefore, rice and fish are main diet of the people living there.

*(3) The edible oils are mustard oil, castor oil, olive oil, groundnut oil, coconut oil, etc.

7. Look at the given map and answer the following:

Ans. (1) Rice (2) Wheat (3) Wheat (4) Rice is grown on a large scale in the southern part of India because this particular region has a hot and humid climate. This region gets heavy rainfall which is required for the growth of rice.

*8. Fill in the table with the various dishes prepared from different grains or vegetables at home.

Grain or Vegetable	Dishes made	Total number
(2) Maize	Paratha, soup, bhel, salad	4
(3) Pumpkin	Vegetables	1
(4) Cluster bean	Vegetable, pickles	2
(5) Jowar	Bhakari, hurda, lahya	3
(6) Carrot	Vegetable, salad, halwa	3

(7) Potato	Wada, bhajiya, paratha, wafers, cutlet	5
(8) Mango	Pickle, jam, pulp	3
(9) Wheat	Chapati, puri, bhakari, laddu	4
(10) Bajra	Bhakri, vada, thepla	3

*9. Guess whether each of the following items is a grain or a vegetable and make a list of food items that can be prepared from each.

Ans. (1) Grain - You can make maize flour, soaps, bhel, salad.

(2) Vegetable - You can make pumpkin puri, sweetmeat, soups, cold drinks.

(3) Vegetable - You can make a bhaji (vegetable dish), pickle.