

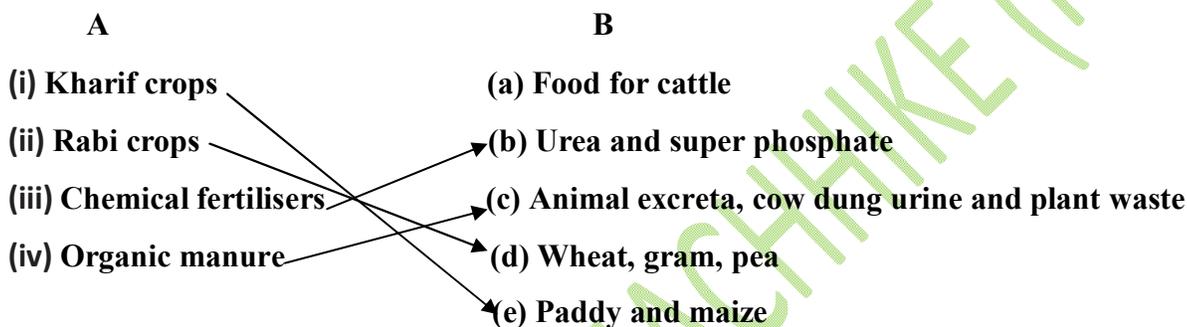
## CHAPTER 1-CROP PRODUCTION AND MANAGEMENT

**Question 1. Select the correct word from the following list and fill in the blanks.**

**(float, water, crop, nutrients, preparation)**

- (a) The same kind of plants grown and cultivated on a large scale at a place is called **crop**.
- (b) The first step before growing crops is **preparation** of the soil.
- (c) Damaged seeds would **float** on top of water.
- (d) For growing a crop, sufficient sunlight and **water** and **nutrients** from the soil are essential.

**Question 2. Match items in column A with those in column B.**



**Question 3 Give two examples of each.**

- (a) **Kharif crop**
- (b) **Rabi crop**

ANSWER- (a) **Kharif crop** - Paddy, maize, soyabean, groundnut, cotton, etc.

(b) **Rabi crop**- Wheat, gram, pea, mustard, etc.

**Question 4. Write a paragraph in your own words on each of the following.**

- (a) **Preparation of soil**
- (b) **Sowing**
- (c) **Weeding**
- (d) **Threshing**

ANSWER- (a) **Preparation of soil:** Turning up the soil and loosening with plough is the first step before growing a crop. Sometime irrigation is also done before ploughing. The loosened soil helps in the growth of earthworms and microbes present in the soil. Then soil is leveled with the help of a leveler.

(b) **Sowing:** Sowing of seeds at proper depths and distances gives a good yield. High-grade variety of seeds are sown after the selection of healthy seeds. Sowing is done by seed drills.

**(c) Weeding:** Weeding involves the removal of unwanted and uncultivated plants called weeds. Weeding is essential as weeds compete with the crop plants for water, nutrients, space and light. Weeding is done with the help of hand or 'kharpa'.

**(d) Threshing:** Separation of the grains from the chaff is called threshing. It is either done manually by sickle or by a machine called harvester.

**Question 5. Explain how fertilisers are different from manure.**

ANSWER-

S.NO	Fertilisers	Manures
1	A fertiliser is an inorganic salt.	Manure is a natural substance obtained by the decomposition of cattle dung, human waste and plant residues.
2	A fertiliser is prepared in factories.	Manure can be prepared in the fields.
3	A fertiliser does not provide any humus to the soil.	Manure provides a lot of humus to the soil.
4	Fertilisers are very rich in plant nutrients like nitrogen, phosphorus and potassium.	Manure is relatively less rich in plant nutrients.

**Question 6- What is irrigation? Describe two methods of irrigation which conserve water.**

ANSWER- The supply of water to crops at different intervals is called irrigation. The two methods of irrigation which conserve water are as follows:

(i) **Sprinkler System:** Under this method, the perpendicular pipes, having rotating nozzles on top, are joined to the main pipeline at regular intervals. When water is allowed to flow through the main pipe under pressure with the help of a pump, it escapes from the rotating nozzles. It gets sprinkled on the crop as if it is raining.

(ii) **Drip system:** In this system, the water falls drop by drop just at the position of the roots. It is the best technique for watering fruit plants, gardens and trees. Water is not wasted at all. It is a boon in regions where availability of water is poor.

**Question 7. If wheat is sown in the kharif season, what would happen? Discuss.**

**ANSWER-** Wheat is Rabi Crop and is sown in the winter season (October to March) and it needs very less water. If it is sown in Kharif season or rainy season (from June to September), the excess water and high temperature may damage the crop. Extreme weather conditions may result in very less or no crop yield

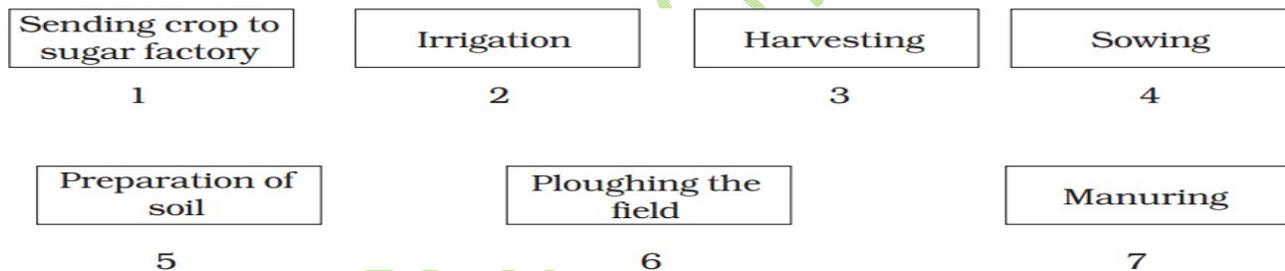
**Question 8. Explain how soil gets affected by the continuous plantation of crops in a field.**

**ANSWER-** Continuous cultivation of crops makes the soil poor in nutrients and crop yield decreases as plants do not get proper nutrients.

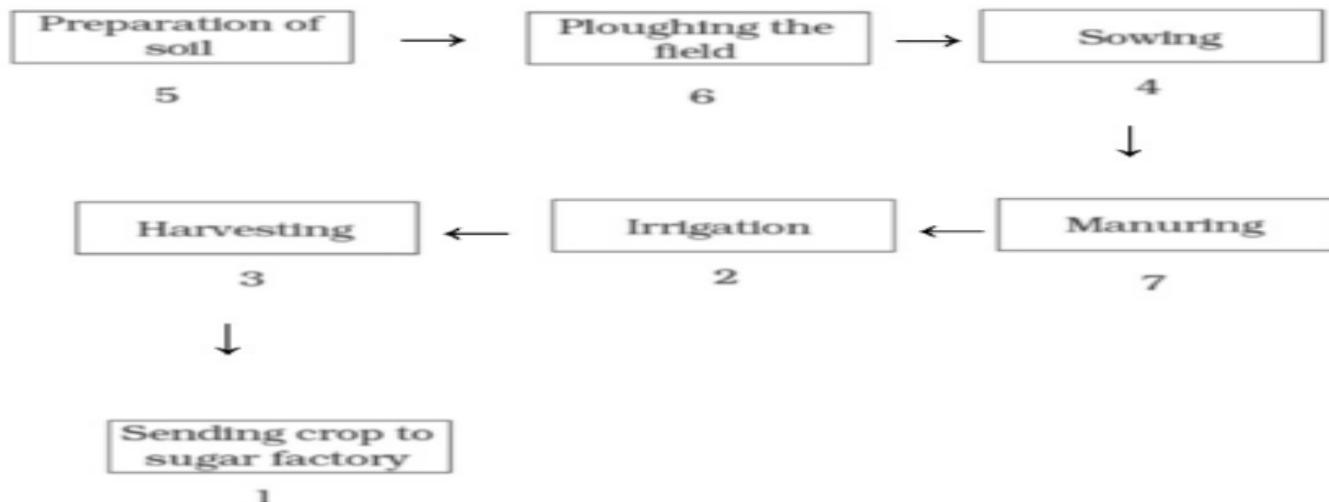
**Question 9. What are weeds? How can we control them?**

**ANSWER-** The undesirable plants may grow naturally along with the crop are called weeds. Weeds can be removed by uprooting or cutting them close to the ground, from time to time. This is done with the help of a khurpi. Weeds are also controlled by using certain chemicals, called weedicides, like 2, 4-D.

**Question 10- Arrange the following boxes in proper order to make a flow chart of sugarcane crop production.**



**ANSWER-**

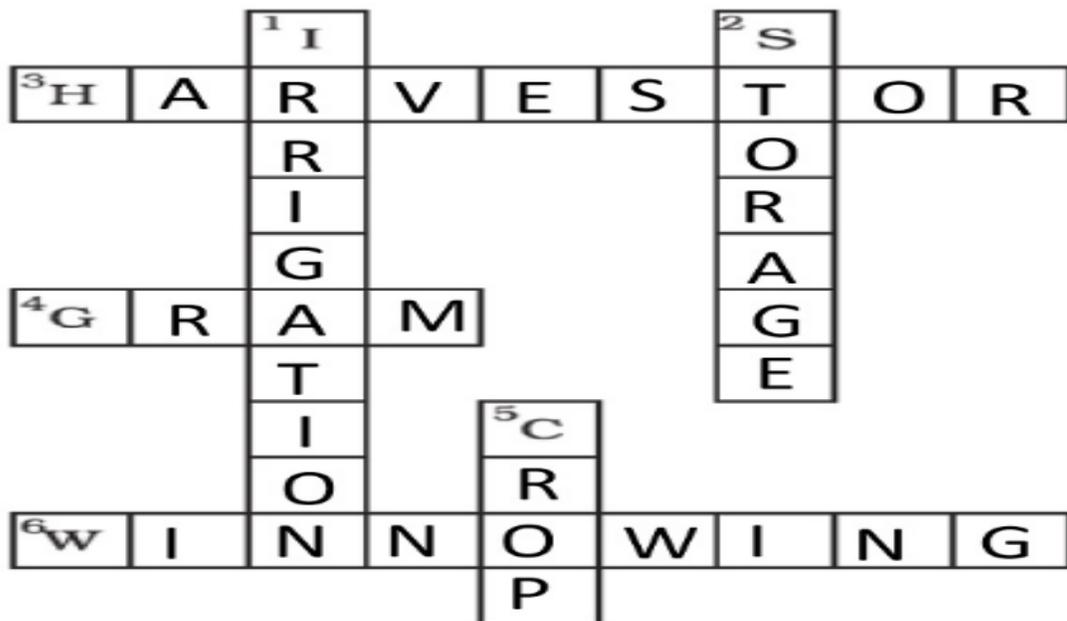


**Question 11: Complete the following word puzzle with the help of clues given below. Down**

1. Providing water to the crops- **Irrigation**
2. Keeping crop grains for a long time under proper conditions- **Storage**
5. Certain plants of the same kind grown on a large Scale- **Crop**

**Across**

3. A machine used for cutting the matured crop- **Harvester**
4. A rabi crop that is also one of the pulses - **Gram**
6. A process of separating the grain from chaff - **Winnowing**



## ONE MARK MCQs

1. To make the food available to the large population, what measure should be taken?

- A) Regular food production                      B) Proper management  
C) Proper distribution                              D) All of above (✓)

2. In which season Rabi crops are sown?

- A) Summer                      B) Winter (✓)                      C) Rainy                      D) Autumn

3. Paddy crop is classified as .....

- A) Rabi crop                      B) Kharif Crop (✓)                      C) Drought Crop                      D) None

4. Which out of following is not considered as agriculture practice?

- A) Sowing                      B) Irrigation                      C) Storage                      D) Transportation (✓)

5. Asha's uncle is levelling the field before sowing the seeds. He is using one of the main tools for this purpose. What is the name of that agricultural tool?
- A) Plough                      B) Hoe (✓)                      C) Cultivator                      D) Seed drill
6. Process of separating grains from chaff is called.....
- A) Threshing (✓)              B) Irrigation                      C) Harvesting                      D) Sowing
7. Harnam found land as very dry during tilling. What should he do to make it less hard before ploughing?
- A) Add manure              B) Use strong cultivator.              C) Watering (✓)                      D) Weeding
8. Salim's mother put some Gram seeds in water. She observed that after some time all seeds come on the surface of water. What will be the possible reason?
- A) Un-healthy seeds (✓)                      B) Healthy seeds  
C) Some out of them healthy and remaining un-healthy                      D) None of these.
9. The process of turning and loosening of soil is called.....
- A) Irrigation                      B) Harvesting                      C) Ploughing (✓)                      D) Weeding
10. What is the name of tool used to remove weeds and to loosen the soil?
- A) Cultivator                      B) Plough                      C) Seed Drill (✓)                      D) Hoe
11. Kulwinder Kaur saw her mother putting some dry leaves of 'Neem' in container containing wheat grains. Why she did so?
- A) To maintain the colour of grains                      B) To increase the taste of grains  
C) To protect it from infestation of microbes. (✓)                      D) None of these
12. Agriculture expert advised the farmer of our village to cultivate leguminous crop to replenish the deficiency of some particular nutrient of soil. What is the name of that particular nutrient?
- A) Sulphur                      B) Oxygen                      C) Nitrogen (✓)                      D) Phosphorous
13. Relative of Rahul resides in Rajasthan, where scarcity of rain is observed. Which method of irrigation will be more effective in this situation?
- A) Sprinkler system              B) Drip system                      C) Both 1 & 2 (✓)                      D) None of these
14. Gurmeet found his father removing some unwanted plants from the main crop. What are these unwanted plants called?
- A) Leguminous plants              B) Weeds (✓)                      C) Bushes                      D) None of these
15. Which statement is wrong regarding Chemical fertilizers
- A) Chemical fertilizers are made of carbonic compound. (✓)

- B) Chemical fertilizers are made in factory.
- C) Chemical fertilizers do not provide humus.
- D) Chemical fertilizers contain mainly Nitrogen, Phosphorus & Potassium.

**16. 2,4-D is a type of .....**

- A) Weedicide(✓)
- B) Manure
- C) Insecticide
- D) Fertilizer

**17. What is the importance of IRRIGATION?**

- A) Helps in Germination of seeds.
- B) Transportation of mineral salts
- C) To protect the crop from frost and hot air current.
- D) all above (✓)

**18. What are the various methods to maintain the fertility of the SOIL?**

- A) Using fertilizers(✓)
- B) Crop rotation(✓)
- C) Drip irrigation
- D) None of these

**19. Excessive use of fertilizers leads to....**

- A) More production of crops
- B) Less fertility of soil
- C) Water Pollution
- D) B & C Both (✓)

**20. Which are rich in particular nutrient.**

- A) Manure
- B) Vermicompost
- C) Fertilizers (✓)
- D) All

## CHAPTER 2-MICROORGANISMS: FRIEND AND FOE

**Question 1. Fill in the blanks.**

- (a) Microorganisms can be seen with the help of a microscope.
- (b) Blue-green algae fix nitrogen directly from air to enhance fertility.
- (c) Alcohol is produced with the help of yeast.
- (d) Cholera is caused by bacteria.

**Question 2. Tick the correct answer.**

**(a) Yeast is used in the production of**

- (i) Sugar (ii) alcohol (✓)
- (iii) hydrochloric acid (iv) oxygen

**(b) The following is an antibiotic**

- (i) Sodium carbonate (ii) Streptomycin (✓)
- (iii) Alcohol (iv) Yeast

**(c) Carrier of malaria-causing protozoan is**

- (i) Female Anopheles mosquito (✓) (ii) cockroach
- (iii) housefly (iv) butterfly

**(d) The most common carrier of communicable diseases is**

- (i) ant (ii) housefly (✓)
- (iii) dragonfly (iv) spider

**(e) The bread or idli dough rises because of**

- (i) heat (ii) grinding
- (iii) growth of yeast cells (✓) (iv) kneading

**(f) The process of conversion of sugar into alcohol is called**

- (i) nitrogen fixation (ii) moulding
- (iii) fermentation (✓) (iv) infection.

**Question 3 Match the organisms in Column A with their action in Column B.**

A	B
(i) Bacteria	(a) Fixing nitrogen
(ii) Rhizobium	(b) Setting curd
(iii) Lactobacillus	(c) Baking bread
(iv) Yeast	(d) Causing malaria
(v) A protozoan	(e) Causing cholera
(vi) A virus	(f) Causing AIDS

**Question 4. Can microorganisms be seen with the naked eyes? If not, how can they be seen?**

**ANSWER-** No, we cannot see them with naked eyes. They can be seen with the help of a microscope.

**Question 5. What are the major groups of microorganisms?**

**ANSWER-** The major groups of microorganisms are:-

- a. Bacteria
- b. Fungi
- c. Protozoa
- d. Some algae

**Question 6- Name the microorganism which can fix atmospheric nitrogen in the soil.**

**ANSWER-** The microorganisms which can fix atmospheric nitrogen are Rhizobium, Azatobactor, Blue green algae etc.

**Question 7. Write 10 lines on the usefulness of microorganisms in our lives.**

**ANSWER-** The usefulness of microorganisms are as follows:

- a. Lactobacillus- a bacterium useful in making curd etc.
- b. Bacteria are useful in formation of bread and cheese.
- c. They are used in cleaning of environment.
- d. Yeasts are used in production of alcohol.
- e. They are used in making antibiotics.
- f. They are used in making vaccines.
- g. Microorganisms are used to make manure.

- h. Bacteria are main nitrogen fixing agent.
- i. They fix the carbon dioxide into useful sugar.

**Question 8. Write a short paragraph on the harms caused by microorganisms.**

ANSWER- The harm caused by microorganisms are as follows-

- a. They cause many communicable diseases like cholera, common cold, tuberculosis etc.
- b. Malaria is caused by a microorganism called plasmodium.
- c. Several plants diseases are caused by bacteria and fungi.
- d. Food poisoning is caused by microorganism.
- e. They are responsible for spoiling of food.

**Question 9. What are antibiotics? What precautions must be taken while taking antibiotics?**

ANSWER- The medicines that kill or stop the growth of the disease-causing microorganism are called **antibiotics**. Streptomycin, tetracycline, erythromycin etc. are common antibiotics.

Following precautions must be taken in using antibiotics-

- (i) These medicines should be taken only on the advice of a qualified doctor.
- (ii) One must finish the course prescribed by the doctor.
- (iii) If anybody takes antibiotics when not needed, his or her body may develop resistance against that antibiotic.

## ONE MARK MCQs

**1-Today Paheli's science teacher brings an instrument in the class. He tells students that it helps us to see magnified and clear view of micro-organisms. Paheli wants to know the name of this instrument. Help her to choose the correct option.**

- a) Telescope      b) Periscope      c) Microscope(✓)      d) Kaleidoscope

**2-Reena wants to know if micro-organisms are our friends or foe. Help her by choosing the correct answer.**

- a) Friend      b) Both Friends and foe (✓)      c) Foe      d) Neither Friends nor foe

**3-We find a lot of bacteria in the curd that we eat. Which bacteria helps in converting milk into curd.**

- a) Rhizobium      b) Lactobacillus (✓)      c) Bacillus Anthracis      d) All of these.

**4-Packed milk does not get spoiled for longer time, why?**

- a) Because it is packed      b) Because it is pure milk  
c) Having more fat      d) Being Pasteurized (✓)

**5-Which of the following is prepared by using yeast?**

- a) Sugar                                      b) Alcohol (✓)                                      c) Hydrochloric acid                                      d) Oxygen

**6-Which of the following is used as antibiotic medicine?**

- a) Sodium Bicarbonate                                      b) Streptomycin (✓)                                      c) Alcohol                                      d) Yeast

**7-Which of following is the carrier of protozoa that causes malaria?**

- a) Female Anopheles mosquito (✓)                                      b) Cockroach                                      c) House fly                                      d) Butterfly

**8-Which out of the following is the common carrier of communicable diseases?**

- a) Ant                                      b) House fly (✓)                                      c) Grasshopper                                      d) Spider

**9-Sanjeev's mother is preparing for making "Bhatura". She has kneaded the flour using luke warm water after adding some yeast powder in it. The kneaded flour swells up after some time. What is the reason behind it?**

- a) Heat                                      b) Grinding                                      c) Increase in yeast cell (✓)                                      d) Kneading

**10-The process of converting sugar into alcohol is known as \_\_\_\_\_**

- a) Nitrogen fixation                                      b) Preservation                                      c) Fermentation (✓)                                      d) Pasteurization

**11-Rahul has put some drops of pond water on glass slide and is preparing to see it under a microscope. According to you, which of the following microorganisms he may see?**

- a) Amoeba                                      b) Paramecium                                      c) Spirogyra                                      d) All of these (✓)

**12-How can we preserve food for longer times in our houses?**

- a) By making pickle                                      b) By making murabba  
c) By storing food in fridge                                      d) By all these methods (✓)

**13-Which of the following microorganism reproduce only in the cells of host organisms?**

- a) Bacteria                                      b) Algae                                      c) Virus (✓)                                      d) Fungi

**14-Who discovered the vaccination for prevention of small pox?**

- a) Louis Pasteur                                      b) Alexander Fleming                                      c) Edward Jenner (✓)                                      d) Robert Koch

**15-Which of the natural process helps in nitrogen fixation?**

- a) Sea storm                                      b) Lightening (✓)                                      c) Earthquake                                      d) Flood

**16-The chemical used to protect food from spoiling is called as \_\_\_\_\_**

- a) Carrier                                      b) Antigens                                      c) Antibiotics                                      d) Preservatives (✓)

**17-Which of the following causes the Rust of wheat?**

- a) Bacteria                                      b) Virus                                      c) Fungi (✓)                                      d) None of the above



## CHAPTER- 7-CONSERVATION OF PLANTS AND ANIMALS

**Question 1. Fill in the blanks.**

- (a) A place where animals are protected in their natural habitats is called **wildlife sanctuary**.
- (b) Species found only in a particular area is known as **Endemic Species**.
- (c) Migratory birds fly to faraway places because of **climate** changes.

**Question 2. Differentiate between the following.**

- (a) Wildlife sanctuary and biosphere reserve
- (b) Zoo and wildlife sanctuary
- (c) Endangered and extinct species
- (d) Flora and fauna

ANSWERS-(a)

Wildlife Sanctuary	Biosphere Reserves
(i) This is an area where wild animals are protected and preserved.	(i) It help to maintain the biodiversity and culture of the area.
(ii) It is place found in Biosphere reserves.	(ii) A biosphere reserve may also contain other protected areas.

(b)

Zoo	wildlife sanctuary
Zoos are the places where some animals are protected in artificial habitats for public view.	Wildlife sanctuaries are used to protect and conserve wildlife in their natural habitats.

(c)

Endangered Species	Extinct Species
(i) These are those species which are facing the danger of extinction.	(i) They are the species which have already vanished from earth.
(ii) Tiger is an example of an endangered species.	(ii) Dinosaurs is an example of extinct species.

(d)

Flora	Fauna
(i) Flora are the plants found in a particular region.	(i) Fauna are the animals found in a particular region.
(ii) Sal, mango, jamun etc. are the example of flora.	(ii) Chinkara, blue-bell, deer, cheetah etc. are examples of fauna.

**Question 3 Discuss the effects of deforestation on the following.**

- (a) Wild animals
- (b) Environment
- (c) Villages (rural areas)
- (d) Cities
- (e) Earth
- (f) The next generation

ANSWERS- (a) **Wild animals**: Deforestation destroys the habitats of many wild animals. They are left to die without their natural shelter.

(b) **Environment**: Deforestation affect the environment adversely due to disturbance of ecological balance. The amount of carbon dioxide is increased in the atmosphere and causes global warming.

(c) **Villages (Rural areas)**: The villagers depend on forests. They are closely related to forests. Due to deforestation various wild animals run to nearby villages and cause danger to them. Villagers will not get fruits, fuel, wood due to deforestation.

(d) **Cities (Urban areas)**: Deforestation does not affect the life of cities directly badly but changes in climate affect cities.

Calamities like flood and droughts do not spare cities.

(e) **Earth**: Deforestation affects the earth. The fertile land of earth is converted into deserts and its temperature rises. It changes its climate and environment.

(f) **The next generation**: Many beautiful fauna and flora are destroyed due to deforestation. So, next generation will not be able to see them. They will not get clean and cool environment. They will not have clean and healthy environment.

**Question 4. What will happen if.**

- (a) We go on cutting trees.

ANSWER- (a) If we go on cutting trees then:

- (i) Ecological balance is disturbed.
- (ii) Earth will lose top fertile layer and will be converted into desert.
- (iii) Floods and droughts will become more frequent.
- (iv) Many animals lost their shelters.
- (v) There will be a scarcity of things like fruits, paper which we get from forests.

**(b) The habitat of an animal is disturbed**

**ANSWER-** Animals become unprotected and unconserved when the habitat of animal is disturbed. It becomes endangered.

**(c) The top layer of soil is exposed.**

**ANSWER-** Top layers of soil are fertile. If they are exposed, they lose their fertility and humus. It causes desertification.

**Question 5. Answer in brief.**

**(a) Why should we conserve biodiversity?**

**ANSWER-** we need to conserve biodiversity to maintain the balance of nature

**(b) Protected forests are also not completely safe for wild animals. Why?**

**ANSWER-** because the poaching takes place at large scale in these areas. The poachers kill wild animals in those protected areas.

**(c) Some tribal depends on jungle. How?**

**ANSWER-** Some tribals depend on jungle for their food, cloths, shelter and other requirements.

**(d) What are the causes and consequences of deforestation?**

**ANSWER-** Deforestation is caused due to urbanisation and industrialisation.

Deforestation is responsible for desertification and natural calamities. Many species of plants and animals are destroyed due to deforestation.

**(e) What is Red Data Book?**

**ANSWER-** Red Data Book is the record book and source book of all the endangered animals and plants.

**(f) What do you understand by the term migration?**

**ANSWER-** Periodical movement of a species of birds from their native place to other places due to changes in climate is called migration. The purpose of migration is for breeding and to enjoy long summer days.

**Question 6- In order to meet the ever-increasing demand in factories and for shelter, trees are being continually cut. Is it justified to cut trees for such projects?**

**ANSWER-** The continuously cutting of trees is not justified for any project. We not only cut the trees, we snatch away the shelters of many animals, birds and other organisms. The ecological balance is also disturbed. It also causes many natural calamities.

**Question 7. How can you contribute to the maintenance of green wealth of your locality? Make a list of actions to be taken by you.**

ANSWER- (i) We can grow more and more plants in our locality.

(ii) We can protect them and provide water to them.

(iii) All the residents should be taught about the benefits of trees.

(iv) They should also be taught about the harms of cutting trees.

**Question 8. Explain how deforestation leads to reduce rainfall.**

ANSWER- Plants are the main agent to maintain the **water cycle in the environment**. So cutting of trees reduces the rainfall of that area. If plants will not absorb water from soil they will not evaporate in the environment to form clouds. If clouds will not be formed then no rain-fall takes place. In this way deforestation reduces rainfall.

**Question 9. Why should paper be saved? Prepare a list of ways by which you can save paper.**

ANSWER- The wood pulps and the bark of trees are used in the manufacturing of paper. If paper is not saved it causes cutting more and more trees. So we should save paper to protect our trees.

Ways to Save Paper.

(i) Paper should be recycled.

(ii) We should not throw paper here and there.

(iii) Waste paper should be collected and sent for recycling.

**Question 10- Complete the word puzzle**

**Down**

**1. Species on the verge of extinction.**

**2. A book carrying information about endangered species.**

**5. Consequence of deforestation.**

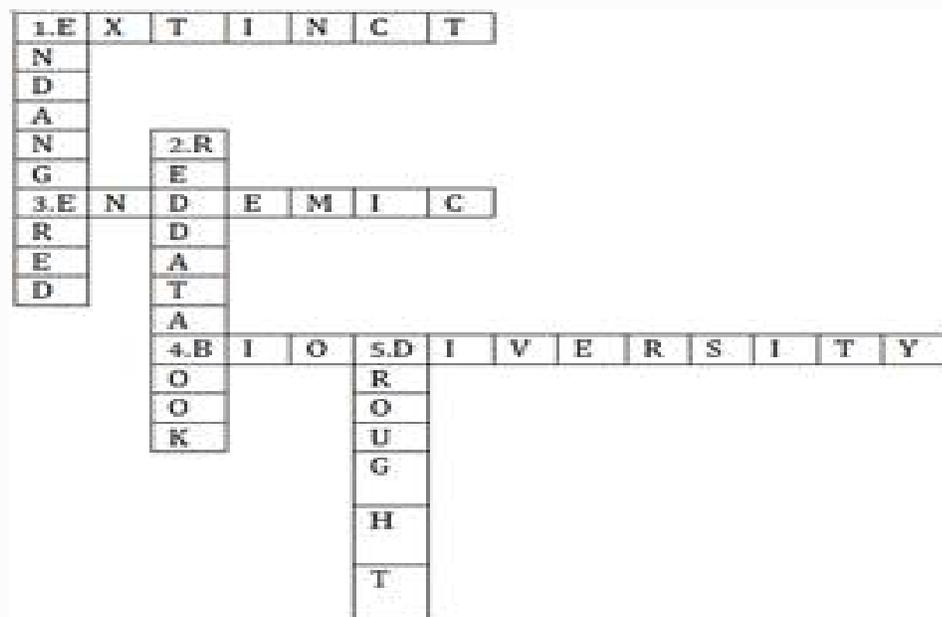
**Across**

**1. Species which have vanished.**

**3. Species found only in a particular habitat.**

**4. Variety of plants, animals and microorganisms found in an area.**

ANSWER-



## ONE MARK MCQs

1-Anchal and Suman visited to Hari ke pattan Lake along with their teacher and there they saw crane like birds. Anchal asked her teacher about birds. What would the teacher have told about birds to them?

- a) Endemic birds (Local/Nature species)                      (b) Migratory birds (✓)  
 (c) Endangered birds    (d) None of the above

2-Naveen visited Science city with his parents. There he saw skeleton of a tiger. He asked his father about its speices? His father told that

- a) Endangered species (✓)                      (b) Extinct species                      (c) Endemic species                      (d) None of the above

3-Umesh visited Dharamshala last week. There he saw Trees of deodar and pine. There he saw some organisms which are found only in that area. Such Species are called as .....

- a) Endangered of species                      (b) Extinct species                      (c) Endemic species (✓)                      (d) None of the above

4-Rajinder went to Delhi in the June vacation to visit Zoo. In Zoo he saw national animal tiger. His teacher told him that tiger is an Endangered species. Rajinder asked his teacher about the book where record of such endangered specie is kept. What would his teacher have told him?

- a) In Science book                      (b) In History book                      (c) In Red data book (✓)                      (d) None of the above

5-While visited Satpura National park Sukhvinder saw a board on which "Satpura Tiger Reserve" was written. He asked his teacher about its main purpose. What would teacher have told him?

- a) To save existence of elephants.                      (b) To save existence of tigers. (✓)  
 (c) To save existence of wild buffalos.                      (d) To save existence of swamp deer.

6-Neeraj and Bharat want to visit the Panchmarhi Biosphere Reserve. Which state should they go to?

- a) Rajasthan                      (b) Uttar Pradesh                      (c) Himachal Pradesh                      (d) Madhya Pradesh (✓)

**7-Aman was going to his uncle's home through a forest. He saw that some persons were cutting trees. He suggested them not to cut the trees so that**

- a) To prevent Soil Erosion                      (b) To save living places of organisms  
 (c) To maintain balance of oxygen                      (d) All of the above (✓)

**8-Sanctuary is a place where \_**

- a) Wild animals are protected (✓)                      b) Plants are protected  
 c) Office of forest department                      d) A Tribal Village is protected

**9-Migratory birds fly to faraway places because of changes:**

- a) Physical                      b) Natural                      c) Climatic (✓)                      d) Chemical

**10-Jagjeet was going to Hoshiarpur with his father. He read a board about saving forest and wildlife. He asked his father why forest and wildlife should be conserved**

- a) Due to this earth's temperature is not increased  
 b) Ecological balance is not disturbed  
 c) Due to this level of carbon dioxide is not increased in earth's atmosphere  
 d) All of the above (✓)

**11-what do you mean by biodiversity?**

- a) Which includes large number of plants  
 b) which includes large number of animals  
 c) Where variety of plants, animals and other organisms lived in a particular habitat by co-ordinating with themselves and with the environment (✓)  
 d) None of these

**12-A science teacher told the importance of recycling of paper in morning assembly .What are the benefits of recycling of paper?**

- a) By this we decrease deforestation                      b) By this we conserve water and energy  
 c) By this we can reuse the used paper                      d) all of the above (✓)

**13-Write the reason and effects of deforestation.**

- a) Due to this quality of soil will be changed (✓)  
 b) Due to this large space available for wild animals to go here and there  
 c) Due to this we will easily see the wild animals to go here and there  
 d) None of these

**14-Write the differences between zoo and wild life sanctuaries.**

- a) Protection for animals is available in ZOO but not in sanctuary.

- b) In ZOO animals live in a natural environment but in Sanctuaries animals live in an artificial environment.
- c) In Sanctuary animals live in a natural environment but in ZOO animals live in an artificial environment. (✓)
- d) All of the above

**15-What is included in an ecosystem.**

- a) Black deer and white eyed deer
- b) Golden cat and Duck with pink head
- c) Python and rhinoceros
- d) All of the above (✓)

**16-what includes in ecosystem?**

- a) It includes all plants and animals
- b) It includes all micro-organisms
- c) It includes all non-living things like environment, soil, river and deltas etc. (✓)
- d) All of the above

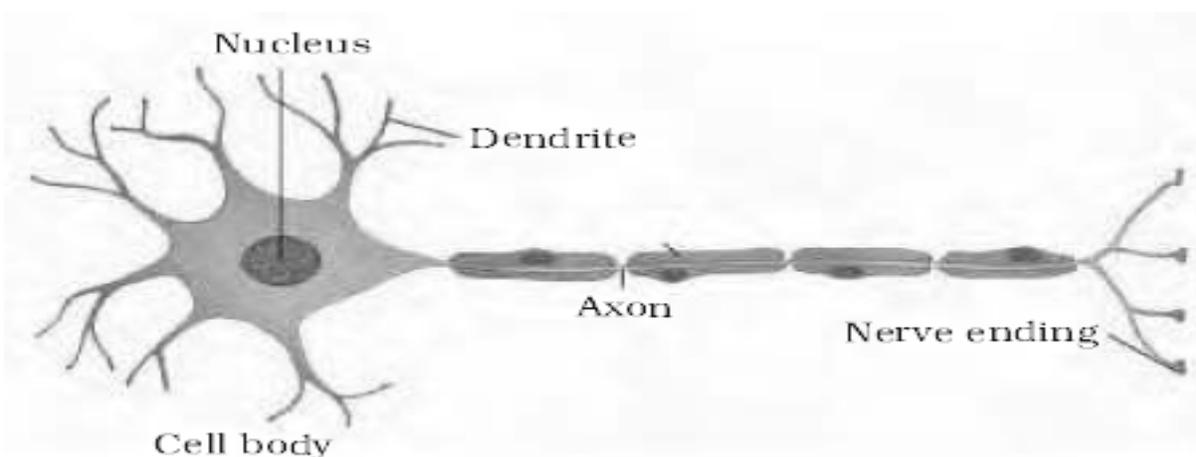
## CHAPTER- 8-CELL STRUCTURE AND FUNCTIONS

Question 1. Indicate whether the following statements are true (T) or false (F).

- (a) Unicellular organisms have one-celled body. **(T)**
- (b) Muscles cells are branched. **(F)**
- (c) The basic living unit of an organism is an organ. **(F)**
- (d) Amoeba has irregular shape. **(T)**

Question 2. Make a sketch of the human nerve cell. What function do nerve cells perform?

ANSWERS-



**Function of nerve cell-** Nerve cells transmit signals in the human body in the form of electric signals.

Question 3 Write short notes on the following.

- (a) Cytoplasm
- (b) Nucleus of a cell

**ANSWERS-** (a) **Cytoplasm-** It is the jelly-like substance found between the nucleus and the cell membrane. It contains many cell organelles. Cytoplasm along with the nucleus forms the protoplasm.

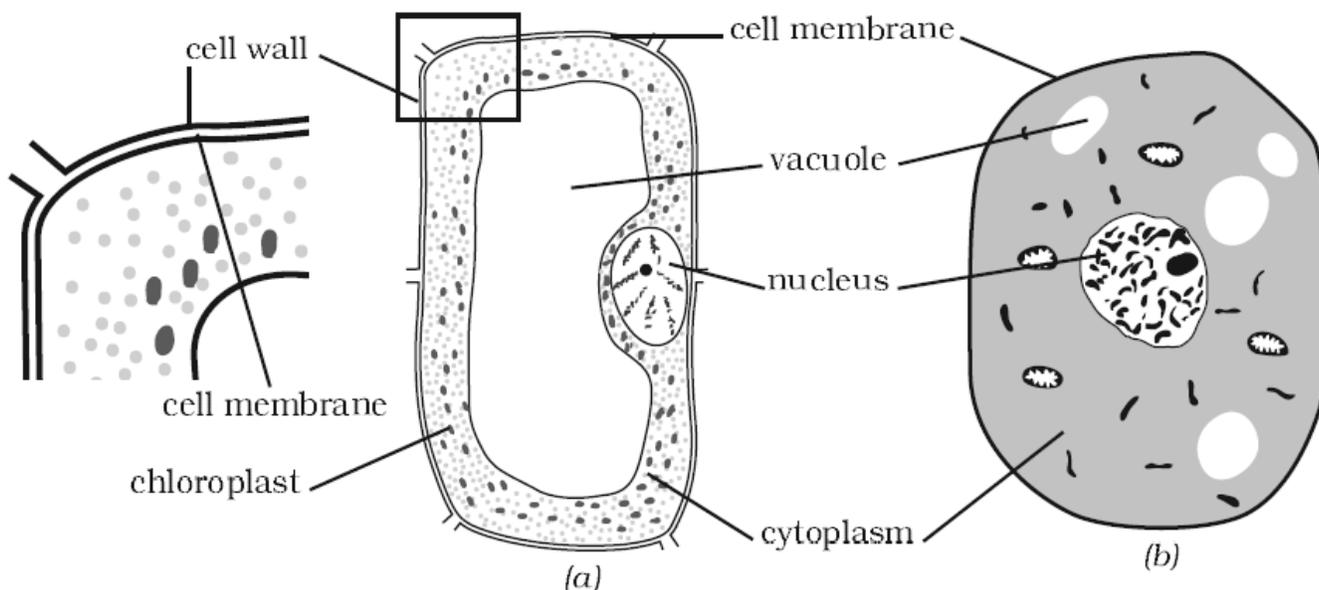
(b) **Nucleus-** It is a spherical structure located in the center of the cell. It is known as the brain of the cell as it controls the activities of the cell. It is separated from the cytoplasm by a membrane called the nuclear membrane.

**Question 4. Which part of the cell contains organelles?**

**ANSWER-** Cytoplasm contains organelles of the cell.

**Question 5. Make sketches of animal and plant cells. State three differences between them.**

**ANSWER-**



**Fig. 8.7 :** (a) Plant cell (b) Animal cell

**Differences between Plant cell and Animal cell**

Plant cell	Animal cell
1-It,s shape is rectangular	1-It's shape is oval
2-Vacuole is large in size	2-Vacuoles are small in size
3-Cell wall is present	3-Cell wall is absent
4-Chloroplast is present	4-Chloroplast is absent
5-Centrisome is absent	5-Centrosome is present.

**Question 6- State the difference between eukaryotes and prokaryotes.**

**ANSWER-**

Prokaryotes	Eukaryotes
1- Most prokaryotes are unicellular.	1- Most eukaryotes are multicellular.
2- Nucleolus is absent	2- Nucleolus is present.
3- Absence of a nuclear membrane.	4- Presence of a nuclear membrane.

**Question 7. Where are chromosomes found in a cell? State their function.**

**ANSWER-** Chromosomes are found in the nucleus of the cell. They carry genes and help in inheritance of characters from the parents to the offspring.

**Question 8. 'Cells are the basic structural units of living organisms'. Explain.**

**ANSWER-** The basic functions of life like respiration, assimilation and all major metabolic activities are carried inside the cell. So, cell is known as structural and functional units of living organism.

**Question 9. Explain why chloroplasts are found only in plant cells?**

**ANSWER-** Chloroplast contains chlorophyll which synthesizes food in plants by the process of photosynthesis.

**Question 10- Complete the crossword with the help of clues given below-**

Across

- This is necessary for photosynthesis- **Chlorophyll**
- Term for components present in the cytoplasm- **Organelle**
- The living substance in the cell- **Protoplasm**
- Units of inheritance present on the chromosomes- **Genes**

Down

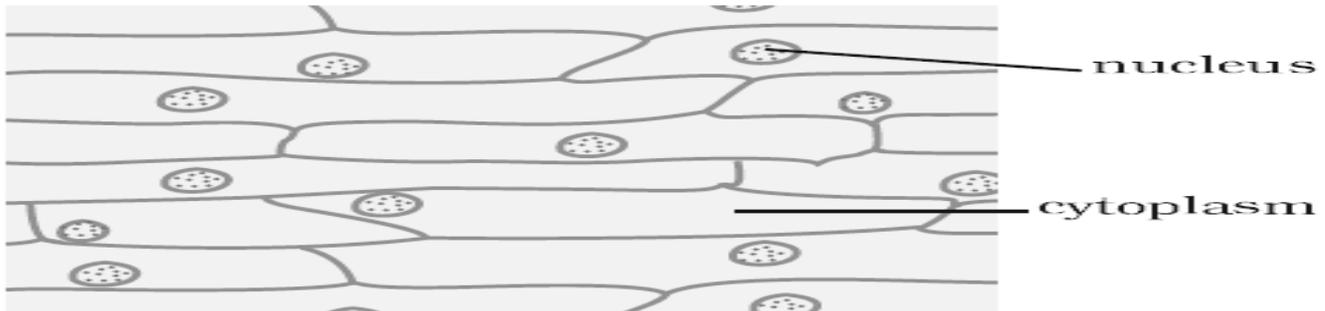
- Green plastids- **Chloroplasts**
- Formed by collection of tissues- **Organs**
- It separates the contents of the cell from the surrounding medium- **Membrane**
- Empty structure in the cytoplasm- **Vacuole**
- A group of cells- **Tissue**

ANSWER-



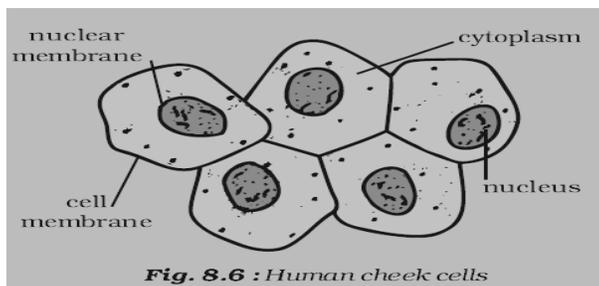
## ONE MARK MCQs

1-Sanjeev saw an onion peel under the microscope. He observed a wall like structure. What is the name of the following structure?



- (A) Animal cell.      (B) Plant cell (✓)      (C) Both 1 and 2.      (D) None of these.

2. Ram saw the interior layer of cheek cell under the microscope. How will he represent the inner central circular part of cell



- A) Cell layer.      (B) Cytoplasm.      (C) Cell wall.      (D) Nucleus(✓)

3-Suman saw a slide of pond water under the microscope. She observed a large number of paramecium moving here and there in water. Now she wants to know how paramecium moves

- A) With feet.      (B) With cilia. (✓)      (C) With flagella.      (D) None of these

4-Naveen and Parveen both were playing in the garden. They observed that the leaves of all the plants were green. What is the reason of green colour of leaves in plants?

- A) Chlorophyll. (✓)      (B) Cell wall.      (C) Glucose.      (D) None of these

5-What do we call the thread like structures in the nucleus of cell

- A) Chromosome(✓)      (B) Plastid.      (C) Mitochondria      (D) Ribosomes

6-Raman's mother cut a boiled egg of hen and gave him to eat. What name would be given to its yellow part?

- A) Albumin.      (B) Yolk. (✓)      (C) Mitochondria (D) None of These

**7-What name should komal give to the main body of the amoeba?**

- A) Pseudopodia. (✓)      (B) Cilia.      (C) Flagella.      (D) Cell Wall

**8-What would you call the diagram given below?**



- A) Amoeba.      (B) Paramecium.      (C) Nerve Cell. (✓)      (D) Blood Cell

**9-Which of the following is not a part of animal cell?**

- A) Chloroplasts. (✓)      (B) Nucleus.      (C) Mitochondria.      (D) None of These

**10-What is the function of nerve cell?**

- A) To transport blood      (B) To exchange gasses  
C) To Transmit and receiving electrochemical messages (✓)      D) None of these

**11-What is the jelly like substance between the nucleus and the cell membrane called?**

- A) Nuclear Sap.      (B) Cytoplasm. (✓)      (C) Protoplasm.      (D) None of These

**12-Which of the following organelle is used by the plant cell for photosynthesis**

- A) Mitochondria.      (B) Golgi Bodies.      (C) Chloroplast. (✓)      (D) None of These

**13-Who discovered the cell?**

- A) Alexander Fleming      (B) Robert Hook (✓)      (C) Robert Koch      (D) Louis Pasteur

**14-Give two examples of multicellular organisms.**

- A) Amoeba, Paramecium      (B) Human, Fox (✓)      (C) Euglena, Bacteria      (D) Both A and C

**15-Write three main parts of the cell?**

- A) Nucleus, Plasma Membrane, Cytoplasm      (B) Cell Wall, Nucleus, Cytoplasm  
(C) Mitochondria, Golgi Bodies, Ribosomes      (D) All of above (✓)

**16-In which part of the cell, organelles are present?**

- A) Nucleus      (B) Plasma Membrane      (C) Cytoplasm(✓)      (D) Protoplasm

**17-Give the basic difference between eukaryotes and prokaryotes.**

- A) Cytoplasm present in eukaryotes and absent in prokaryotes  
 B) Cytoplasm absent in eukaryotes and present in prokaryotes  
 C) Nuclear Membrane present in eukaryotes and absent in prokaryotes(✓)  
 D) Nuclear Membrane absent in eukaryotes and Present in prokaryotes

**18-In which part of the cell is the chromosome found?**

- A) Cytoplasm      (B) Nucleus(✓)      (C) Mitochondria      (D) Golgi Bodies

**19-Chloroplast or Chlorophyll is found in which type of cell?**

- A) Animal cell      (B) Plant Cell(✓)      (C) Both A and B      (D) None of these

**20-Give any two examples of unicellular organisms.**

- A) Amoeba, Paramecium      (B) Human, Fox      (C) Euglena, Bacteria      (D) Both a and c (✓)

**21-What is included in the term 'protoplasm'?**

- A) Nucleus and Cytoplasm(✓)      (B) Nucleus and Cell Membrane  
 (C) Cytoplasm and Cell Membrane      (D) None of these

**22-The jelly like fluid substance present in cell is called:-**

- A) Protoplasm      (B) Cytoplasm(✓)      (C) Nucleus      (D) Chromosomes

**23-Green colour of leaves is due to the presence of pigment \_\_**

- A) Chlorophyll (✓)      (B) Mitochondria      (C) Ribosomes      (D) Chloroplast

**24-Out of the following parts of a cell listed below, name the part that is common to Plant cell,**

**Animal cell and bacterial cell:-**

- A) Chloroplast      (B) Cell Membrane(✓)      (C) Cell Wall      (D) Nucleus

**25-Give the basic difference between plant cell and animal cell.**

- A) Cell wall present in Animal cell and absent in Plant cell  
 B) Cell wall absent in Animal cell and present in Plant cell (✓)  
 C) Cytoplasm absent in Animal cell and present in Plant cell  
 D) Cytoplasm present in Animal cell and absent in Plant cell



- (f) Amoeba reproduces by budding. (F)
- (g) Fertilization is necessary even in asexual reproduction. (F)
- (h) Binary fission is a method of asexual reproduction. (T)
- (i) A zygote is formed as a result of fertilization. (T)
- (j) An embryo is made up of a single cell. (F)

**Question 5. Give two differences between a zygote and a foetus.**

ANSWER-

Zygote	Foetus
1-Zygote is single cellular	1-Foetus is multicellular.
2-The fusion of male gamete(sperm) with female gamete(egg) give rise to a new cell called zygote	2-Foetus is formed by many divisions of zygote.
3- All the body parts of baby cannot be identified	3-All the body parts of baby can be identified

**Question 6- Define asexual reproduction. Describe two methods of asexual reproduction in animals.**

ANSWER- Asexual reproduction is the production of a new organism from a single parent without the involvement of sex cells or gametes.

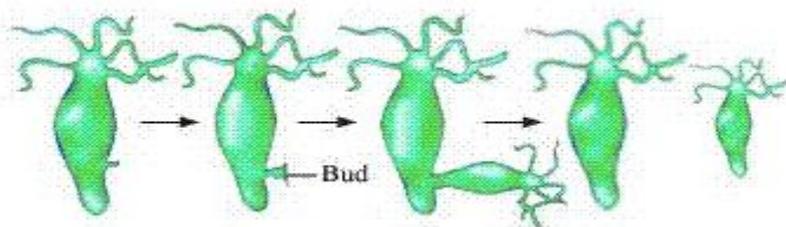
Two methods of asexual reproduction in animals are:

- (i) **Binary fission:** It is a type of asexual reproduction in which a single cell divides into two halves, Organisms that reproduce through binary fission are bacteria and Amoeba.



Fig: Binary fission in Amoeba

- (ii) **Budding:** Budding involves the formation of a new individual from the bulges, known as buds formed on the parent body, This method of reproduction is common in Hydra.

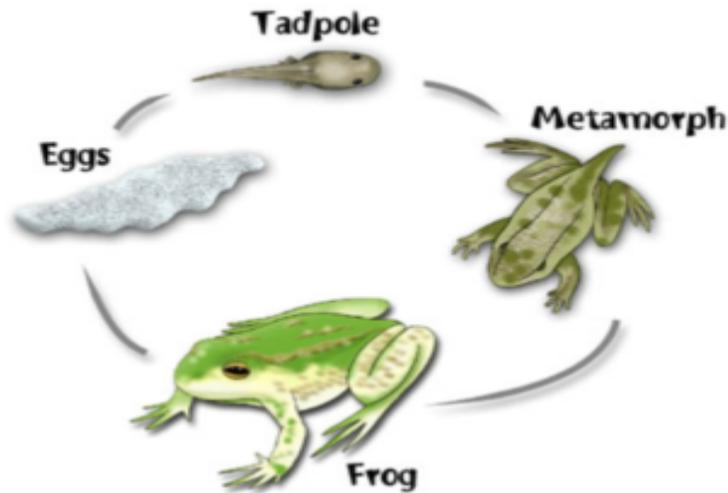


**Question 7. In which female reproductive organ does the embryo get embedded?**

ANSWER- In walls of uterus.

**Question 8. What is metamorphosis? Give examples.**

ANSWER- The transformation of larvae into an adult through drastic changes in appearance is called metamorphosis. For example the hatching of a fertilized egg of frog produces a very immature young one called tadpole. The tadpole or larvae of frog develops gradually and undergoes many drastic changes in appearance before it forms an adult frog.



**Question 9. Differentiate between internal Fertilization and external Fertilization.**

ANSWER-

Internal fertilization	External fertilization
1) The Fertilization which take place inside the female body is called internal Fertilization.	The Fertilization which take place outside the female body is called external Fertilization.
2) Less number of eggs are produced.	Large number of eggs are produced
3) For Example: human, cow, dogs etc	For Example: fish, frog

**Question 10- Complete the crossword puzzle using the hints given below.**

**Across**

- The process of the fusion of the gametes- **Fertilization**
- The type of Fertilization in hen- **Internal**
- The term used for bulges observed on the sides of the body of hydra- **Buds**
- Eggs are produced here- **Ovary**

**Down**

- Sperms are produced in these male reproductive organs- **Testis**
- Another term for the fertilized egg- **Zygote**
- These animals lay eggs- **Oviparous**



- A type of fission in amoeba- **Binary**

## ONE MARK MCQs

- The animals that give birth to young ones are known as
  - Oviparous (✓)
  - Viviparous
  - Both a and b
  - None of these
- Tadpole is the developing stage of.....
  - Dog
  - Cat
  - Frog (✓)
  - Humans
- Where does the fusion of male and female gametes generally take place?
  - Fallopian tube (✓)
  - Ovary
  - Uterus
  - Zygote
- Name the structure formed after fertilization.
  - Foetus
  - Zygote (✓)
  - Embryo
  - None of these
- Eggs are formed in the -----.

- a) Testis                      (b) Penis                      (c) Ovary (✓)                      (d) None of these

**6. How many modes of reproduction are there in animals?**

- a) One                      (b) Two (✓)                      (c) Three                      (d) Four

**7. A sperm consists of----- parts.**

- a) One                      (b) Two                      (c) Three(✓)                      (d) Four

**8. What is Foetus?**

- a) Well developed embryo(✓)                      (b) Female gamete  
(c) A zygote                      (d) Male gamete

**9. The transformation of the larva into an adult through drastic changes is called --.**

- a) Asexual reproduction                      (b) Metamorphosis (✓)  
(c) Development                      (d) Sexual reproduction

**10. Cloning is a mode of ---- --.**

- a) Sexual reproduction                      (b) Asexual reproduction (✓)  
(c) Both a and (b)                      (d) None of these

**11. Sets of reproductive terms are given below. Choose the set that has an incorrect combination.**

- a) Sperm, testis, sperm duct, penis                      (b) Menstruation, egg, oviduct, uterus  
(c) Sperm, oviduct, egg, uterus (✓)                      (d) Ovulation, egg, oviduct, uterus

**12. In humans, the development of fertilized egg takes place in the\_\_\_.**

- a) Ovary                      (b) Testis                      (c) Oviduct                      (d) Uterus(✓)

**13. In the group of animals given below, hen is the odd one out; Human being, cow, dog, hen:**

**The reason for this is**

- (a) It undergoes internal fertilization.                      (b) It is oviparous.  
(c) It is viviparous. (✓)                      (d) It undergoes external fertilization.

**14. Animals exhibiting external fertilization produce a large number of gametes. Pick the appropriate reason from the following:**

- a) The animals are small in size and want to produce more offsprings.

- b) Food is available in plenty in water.  
 c) To ensure better chances of fertilization. (✓)  
 d) Water promotes production of large number of gametes.

**15. Reproduction by budding takes place in \_\_\_\_\_**

- a) Hydra (✓)      (b) Amoeba      (c) Paramecium      (d) Bacteria

**16. Which of the following statements about reproduction in humans is correct?**

- a) Fertilization takes place externally.  
 b) Fertilization takes place in the testis.  
 c) During fertilization egg moves towards the sperm.  
 d) Fertilization takes place inside the body of human female. (✓)

**17. In human beings, after fertilization, the structure which gets embedded in the wall of the uterus is --.**

- a) Ovum      (b) Embryo (✓)      (c) Foetus      (d) Zygote

**18. Name the first animal that was cloned successfully.**

- a) Dolly sheep (✓)      (b) Dobby sheep      (c) Goggy sheep      (d) Bobby sheep

**19. What is the full form of IVF?**

- a) In-vitro fertilization (✓)      (b) International vaccine forum  
 (c) In-vitro formation      (d) In-vitamin fertilization

**20. Which of the following is viviparous animal?**

- a) Salmon      (b) Cobra      (c) Salamander      (d) Dolphin (✓)

**21. Which of the following shows budding?**

- a) Yeast (✓)      (b) Amoeba      (c) Paramecium      (d) Plasmodium

**22. The process of release of an egg from the ovary is called --.**

- a) Reproduction      (b) Menstruation      (c) Ovulation (✓)      (d) Menopause

**23. Which of the following is not a part of the reproductive system of the human female?**

- a) Ovary      (b) Oviduct      (c) Uterus      (d) Testis (✓)