

Class – VIII
SCIENCE

Conservation of plants and animals

1. Define Biosphere.

Ans. Biosphere is that part of the earth in which living organisms exist.

2. Define Wildlife.

Ans. The term wildlife means all the animals and plants which are found naturally in the forests and other natural habitats.

3. Define Biodiversity.

Ans. Biodiversity refers to the variety of organisms (plants, animals, and microorganisms, etc) found in a particular area or habitat.

4. Define ecosystem.

Ans. An ecosystem is a system which includes all the living organisms of an area and the physical environment in which they live.

5. What is deforestation? Write the causes of deforestation.

Ans. The clearing of forests over a wide area is called deforestation.

The Various causes of deforestation are the following :

- i) trees are cut down to obtain wood for using as fuel.
- ii) trees are cut down to obtain wood for making doors, windows, and furniture.
- iii) trees are cut down to obtain wood for making paper.
- iv) trees are cut down to obtain more agricultural land for cultivation of crops for the increasing population.

6. Why should we conserve forests and wildlife to preserve biodiversity? Write some of the measures which can be taken for the conservation of forests and wildlife?

Ans. We should conserve forests and wildlife to preserve biodiversity to prevent endangered species from becoming extinct and to maintain ecological balance in nature.

Measures which can be taken for the conservation of forests and wildlife are given below:

- i) the natural habitats of wildlife animals should be preserved by establishing conservation areas such as Biosphere Reserves, Wildlife Sanctuaries and National Parks where the wild animals can flourish in natural surroundings protected from the outside world.
- ii) a total ban should be imposed on the poaching or capturing of any wild animal or bird.

7. Define Biosphere Reserve.

Ans. A Biosphere Reserve is a large protected area of land meant for the conservation of wildlife, biodiversity, and the traditional lifestyle of the tribal people living in the area.

8. Name five Biosphere Reserves of India.

Ans. i.) Great Nicobar Biosphere Reserve.

ii) Kaziranga Biosphere Reserve

iii) Sunderbans Biosphere Reserve

iv) Kanha Biosphere Reserve

v) Pachmarhi Biosphere Reserve.

9. Write three roles of Biosphere Reserves

- i) Biosphere Reserves help in the conservation of wildlife of the area.
- ii) Biosphere Reserves help to maintain the biodiversity of the area.
- iii) Biosphere Reserves help to maintain the lifestyle of the tribal people living in the area.

10. Define Flora and Fauna.

Ans. The plants and animals of a particular area are called flora and fauna of that area.

11. Define Endemic Species.

Ans. Endemic species are those species of plants and animals which are found exclusively in a particular area.

12. Give two examples of endemic flora.

Ans. Sal and Wild mango

13. Define wildlife sanctuary.

Ans. A wildlife sanctuary is a protected area of land which is created for the protection of wild animals in their natural environment like forests.

14. Write five wildlife sanctuaries of India.

Ans. i) Sanjay Gandhi Wildlife Sanctuary.

ii) Mudumalai Wildlife Sanctuary.

iii) Sultanpur Lake Bird Sanctuary.

iv) Nagarjunsagar Wildlife Sanctuary.

v) Bori Wildlife Sanctuary.

15. Define National Park. Write five prominent National Parks of India.

Ans. A National Park is a relatively large area of scenic beauty protected and maintained by the Government to preserve flora and fauna, landscape, historic, objects of the area and places of scientific interest.

Five National parks of India are:

i) Corbett National Park

ii) Gir National Park

iii) Kaziranga National Park

iv) Satpura National Park

v) Bandipur National Park

16. Define endangered species. Write five examples

Ans. The species which are facing the risk of extinction are called endangered species.

Some examples of endangered animals species are Tiger, Snow leopard, Desert cat, Asiatic lion, Kashmir stag.

17. Define Red Data Book.

Ans. Red Data Book is the book which keeps a record of all the endangered animals, plants, and other species.

18. Define Botanical Garden.

Ans. A place where a variety of plants are collected, cultivated and conserved for scientific and educational research and ornamental and recreational purposes is called a botanical garden.

19. Define Reforestation.

Ans. If the deforested area is left undisturbed or if new plants or seeds are sown in deforested area can be converted back to forest habitat. This is called reforestation.

20. Define conservation of biodiversity.

Ans. The scientific management, maintenance, protection, and preservation of biodiversity to prevent the extinction of plant and animal species.

Cell structure and functions

Cell: A cell is the smallest structural and functional unit of an organism that is capable of carrying out essential life processes.

Unicellular organism: This is an organism that is made up of only one cell. Examples of unicellular organisms are Amoeba, Paramecium, and Euglena.

Multicellular organism: This is an organism that is made up of more than one cell. Many plants and animals including human beings are multicellular organisms.

Variation in size of cells:

Most cells too small to be seen without a microscope. The size of cells ranges from a micrometre to a few centimeters. Some cells, such as the eggs of many animals are large enough to be seen by the naked eye. The largest cell is the egg of an ostrich which is about 13 to 17 cm in diameter. The smallest cells are those of bacteria which are usually about

0.1-0.5 micrometre in diameter. Examples of human cells :skin cell (30 micrometre in diameter)

Red blood cells(8 micrometre in diameter).

Prokaryotes: These are usually single celled organisms but some are multicellular. Examples are bacteria and blue green algae.

Prokaryotic cells: Cells that lack a true nucleus i.e,a well defined, membrane bound nucleus or any membrane bound cell organelle are called prokaryotic cells.

Eukaryotes: Organisms which are made up of eukaryotic cells are called eukaryotes.

Eukaryotic cell: Cells that contain a well defined double membrane bound nucleus along with other membrane bound cell organelles are called eukaryotic cells.

Structure of cell :

Cell membrane :The cell membrane is the outermost covering of the cell that separates it from the external environment.

Nucleus: The nucleus is the control centre of the cell. It contains genetic material and is therefore responsible for the hereditary characteristics of an organism.

The nucleus is made up of nuclear membrane, nucleoplasm, nucleolus.

Nucleolus:It is the spherical body present inside the nucleus. A nucleus may contain up to four nucleoli. The nucleolus plays an important part in the synthesis of proteins and certain other substances.

Cytoplasm : Cytoplasm is the gel like fluid contained within the cell membrane of the cell but excluding the nucleoplasm within the nucleus. It is composed of water along with proteins, soluble salts, organic and inorganic ions.

Endoplasmic reticulum: The endoplasmic reticulum is a network of membranous tubules that spread through a significant part of the cytoplasm. It supports proteins synthesized within the nucleus.

Ribosomes: Ribosomes are tiny spherical bodies that are found either free in the cytoplasm or attached to membranous structures such as rough ER. Their main function is the synthesis of proteins which are necessary for the cells to perform their functions.

Lysosomes: Lysosomes are spherical vesicles that are pinched off from Golgi bodies. These vesicles contain digestive enzymes to digest substances such as proteins and lipids worn out cell organelles and foreign substances that enter the cell.

Mitochondria: The mitochondria is a rod shaped double membrane bound organelle. It contains enzymes in the inner membrane which is where most chemical reactions occur. The main function of the mitochondria is to produce energy through respiration. This is done by oxidizing organic compounds in the presence of enzymes. This organelle is referred to as the power house of the cell.

Vacuole: Vacuoles are simple membrane bound vesicles present in the cytoplasm. They hold and store small amounts of water, minerals, sugar, amino acids and waste products. They are large in plant cells than in animal cells.