

RAINBOW INTERNATIONAL EDUCATIONAL INSTITUTION SHOPIAN**Subject: Bioscience****Class-8th****Chapter: (1) Reproduction in Animals****Exercise Questions**

Q1. Explain the importance of reproduction in organisms?

Ans . Reproduction is an important biological process performed by all living organism

The significance of reproduction is due the following reasons.

- i. Reproduction maintains existance of life on earth.
- ii. Reproduction carries genetic characters from parents to offsprings.
- iii. Reproduction helps in perpetuation of species.
- iv. Reproduction maintains composition of population.
- v. Reproduction introduces variations which are essential for evolution.

Q2. Describe the process of fertilization in human beings?

Ans: The process of fusion of haploid male gamete (sperm) and haploid female game called egg to form a diploid zygote is called fertilization. In human beings sperms are transferred into females genital tract and fertilization occurs in Ampulla region of fallopian tube inside the body of female . it is called internal fertilization.

During the fertilization nucleus of egg(ovum) and nucleus of sperm fuses to form diploid nucleus in the form of zygote(diploid cell).

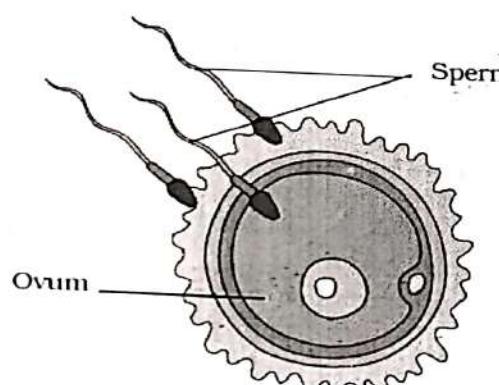
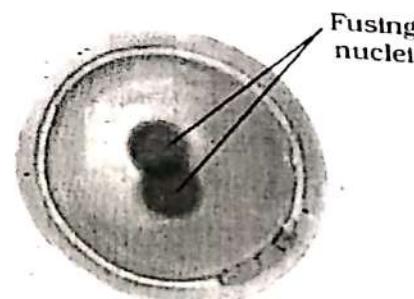


Fig. 9.5 : Fertilization



ZYGOTE

Q3. Choose the appropriate answer:

a) Internal fertilization occurs in:

- i. In female body ii. Outside female body
male body
- ii. in male body iv. ou

- b) A tadpole develops into an adult frog by the process of
(i) Fertilization. (ii) **Metamorphosis.** (iii) Embedding. (iv) Budding.
c) The number of nuclei present in a zygote is
(i) None. (ii) **One.** (iii) Two. (iv) Four.

Q4. Indicate whether the following statements are True (T) or False (F):

- (a) Oviparous animals give birth to young ones. (**FALSE**)
(b) Each sperm is a single cell. (**TRUE**)
(c) External fertilization takes place in frog. (**TRUE**)
(d) A new human individual develops from a cell called gamete. (**FALSE**)
(e) Egg laid after fertilization is made up of a single cell. (**TRUE**)
(f) Amoeba reproduces by budding. (**FALSE**)
(g) Fertilization is necessary even in asexual reproduction. (**FALSE**)
(h) Binary fission is a method of asexual reproduction. (**TRUE**)
(i) A zygote is formed as a result of fertilization. (**TRUE**)
(j) An embryo is made up of a single cell. (**FALSE**)

Q5. Give two differences between a zygote and a foetus.

Ans:

Zygote	Foetus
It is formed by fusion of Sperm and ovum.	It is a fully developed unborn baby Formed due to growth and Development after 8 weeks .
2. It is a single celled stage which marks Beginning of embryonic development.	It is a multicellular with complete organogenesis.
3. It is formed in ampulla of fallopian tube.	3. It is formed in uterus.

Q6. Define asexual reproduction. Describe two methods of asexual reproduction in animals.

Ans: Asexual Reproduction: it is a method of reproduction in which offspring's are produced by a single parent without any formation or fusion of gametes. It is also called uniparental reproduction because here only one parent is involved.

Asexual reproduction occurs in Amoeba, Paramecium, Euglena, Hydra, Yeast etc.

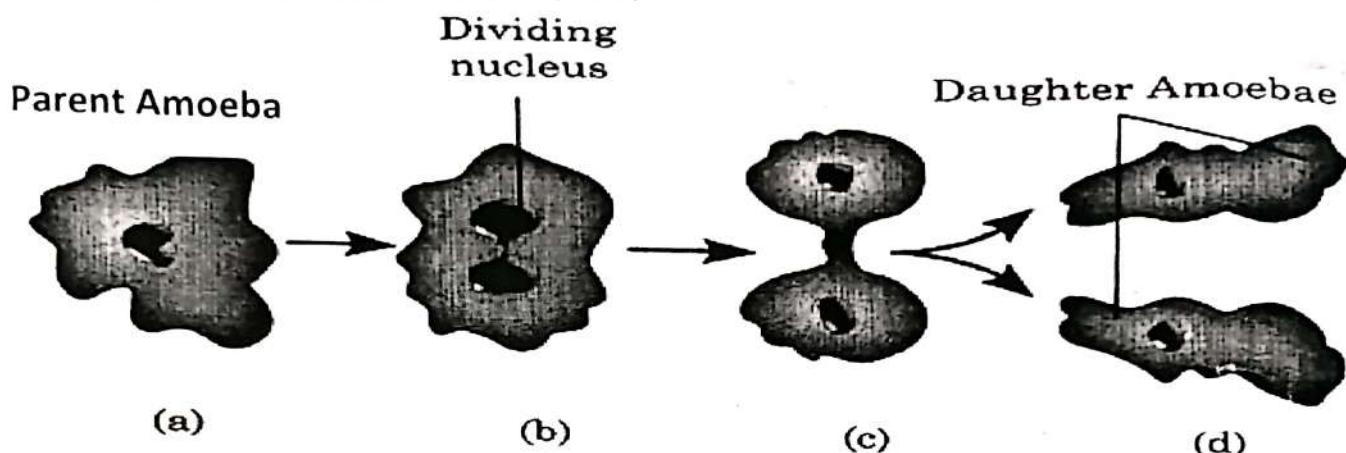
The various methods of asexual reproduction are:

1. Fission
2. Budding
3. Fragmentation

1. Fission: it is a type of asexual reproduction in which parent body splits into two or more than two equal halves, each half develops into a new organism. On the bases of number of daughter cells formed fission is of two types:

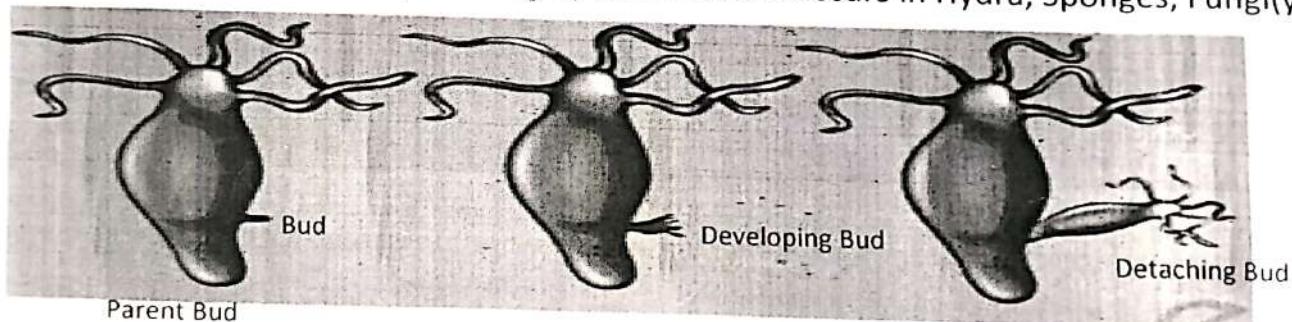
Binary fission: In this type of fission only two daughter cells are formed. It occurs in Amoeba, Euglena, and Paramecium.

Multiple fission: In this type of fission more than two daughter cells are formed. It occurs in plasmodium, Amoeba (encysted)



Binary fission in Amoeba

Budding: it is a method of asexual reproduction in which new individuals are formed as a small out growth of parent body called bud. It occurs in Hydra, Sponges, Fungi(yea



Q7. In which female reproductive organ does the embryo get embedded?

Ans: After the fertilization zygote divides continuously to form a ball of cells called blastocyst. The embryo in blastocyst stage gets embedded or fixed with the inner wall of Uterus. This process is called implantation.

Q8. What is metamorphosis? Give examples.

Ans: Metamorphosis: it is the process of transformation of larva into an adult. During metamorphosis larva undergoes external as well as internal changes to become adult.

e.g in frog tadpole larva undergoes metamorphosis to become adult frog.

Q9. Differentiate between internal fertilization and external fertilization.

Ans:

Internal Fertilization	External Fertilization
1. Fusion of gametes occur inside female Body	1. Fusion of gametes occur outside female Body.
2. Chances of offspring's survival are high	2. Low chances of survival of offspring'
3. Sperms are transferred into female body	3. Sperms are released in open.
4. It occurs in Humans, Cows, Hens and Other animals.	4. It occurs in frog, fishes, starfish etc.

(2) Terminology

- **Adolescence:-** The period of life , when the body undergoes lot of physical & biological changes leading to reproductive maturity, is called adolescence. Adolescence begins around the age of 10 or 11 years and lasts upto 18 or 19 years of age.
- **Puberty:-** The period during which adolescents boys and girls reach sexual maturity and become capable of reproduction is called puberty. Generally girls attain puberty at an age of 10 or 13 years while boys reach puberty at the age of 12 or to 14 years.
- **Adam's apple:-** It is the protruding voice box usually seen in boys at puberty.
- **Sebaceous glands:-** These are the oil glands present on the skin due to which many young people get acne & pimples on their faces.
- **Secondary sexual characters:-** These are certain external features of body that developed at puberty and which help to distinguish the males from females e.g. development of breasts in females & appearance of facial hair i.e. moustaches & beard in males.
- **Hormones:-** These are the chemical substances released  secreted by specialized tissues in the body called Endocrine glands.
- **Endocrine glands:-** These are the glands which pour their secretions (hormones) directly into the blood stream .They do not have ducts, hence called as ductless glands. e.g. pituitary gland , thyroid gland, adrenal gland , testes , ovaries , etc.
- **Exocrine gland:** A gland which secrets its product into a duct or tube is called Exocrine gland e.g, Salivary gland, Sweat glands, Sebaceous gland (oil glands)
- **Testosterone:-** It is the male sex hormone which is produced by the testes at puberty.
- **Estrogen:-** It is the female sex hormone which is produced by the ovaries at puberty.

- **Pituitary gland:-** It is an endocrine gland which is situated in head region & influence the activity of other endocrine glands.
- **Menstruation:-** It is the bleeding from female reproductive tract due to degeneration of uterus wall when fertilization of egg does not take place .It occurs once in about 28 to 30 days.
- **Menarche:-** The first menstrual flow which begins at puberty is known as menarche.
- **Menopause:-** Stoppage of menstruation is termed as menopause .It usually stops at the age of 45 to 50 years.
- **Chromosomes:-** These are the thread like structures , present inside the nucleus & are responsible for the determination of sex of an individual & other characters due to presence of genes on them.
- **Thyroxine:-** It is as a hormone which is secreted by the thyroid gland & is essential for the normal growth & development of an organism.
- **Goitre:-** It is an outgrowth of thyroid gland which is produced due to deficiency of Iodine in the body.
- **Insulin:-** It is a hormone which is secreted by the pancreas & is responsible for the control of blood sugar level.
- **Diabetes:-** It is a metabolic disorder which results due to increased sugar level in the blood because of less or no production of insulin in the body.
- **Adrenalin:-** It is an emergency hormone which is released by the adrenal gland at the time of emergency.
- **Metamorphosis:-** The transformation of the larva into an adult through drastic changes is called metamorphosis.
- **Sex hormones:** The hormones involved in the development and control of reproductive organs and secondary sexual characteristics are called sex hormones.

There are two main common sex hormones namely

- Male sex hormone/Testosterone: ii. Female sex hormone/Estrogen/Oestrogen:
- Formula to calculate full height of a person = $\frac{\text{Present height}}{\text{age of full height at present age}} \times 100$

Example: A boy is 8 years old and 108 cms tall. At the end of growth period calculate his full height

Solution: $\frac{108}{7} \times 100 \text{ cm} = 150 \text{ cm tall}$

Textual Questions

Q1) What is the term used for secretions of endocrine glands responsible for changes taking place in the body?

Ans: Hormones.

Q2) Define adolescence?

Ans: Adolescence is the period of life, when the body undergoes some physical & biological changes leading to reproductive maturity. Adolescence begins around the age of 10 or 11 years and lasts upto 18 or 19 years of age.

Q3) What is Menstruation? Explain.

Ans: Menstruation is a discharging of blood, secretions & tissue debris from the uterus that occurs in non-pregnant females every month.

In females, the reproductive phase of life begins at puberty (10 to 12 years of age) & generally lasts till the age of approximately 45 to 50 years. The ova begin to mature with the onset of puberty. One ovum matures & is released by one of the ovaries once in about 28 to 30 days. During this period, the wall of the uterus becomes thick so as to receive the egg, in case it is fertilised & begins to develop. This results in pregnancy. If fertilization does not occur, the released egg, and the thickened lining of the uterus along with blood vessels are shed off. This causes bleeding in women which is called menstruation.

Q4) List changes in the body that take place at puberty?

Ans:- Various changes occurring at puberty are:-

- a) **Change in body shape**:- Males/Boys develop broader shoulder , muscles & wider chest while as in girls the region below the waist becomes wider.
- b) **Voice change**: The voice of boys become deeper due to better development of voice box that can be easily seen as a protruding part, called adams apple as compared to girls due to which they produce a sound of lower pitch than girls.
- c) **Increased activity of sweat & sebaceous glands**:- These glands secrete sweat & oil respectively which results in a very common problem of acne & pimples.

d) Development of sex organs:- With puberty development of testes & penis takes place in males & enlargement of ovaries occurs in females .Both testes & ovaries are capable of producing sperms & eggs respectively.

e) Maturity: Reaching mental , intellectual & emotional maturity.

f) Increase in the height of an individual.

Q5) Prepare a table having two columns depicting names of endocrine glands & hormones secreted by them.

Ans:

<i>Endocrine glands</i>	<i>Hormones Secreted</i>
1. Thyroid gland	1. Thyroxine , Calcitonin, T3 (Tri-iodothyroxine)
2. Adrenal gland	2. Cortisol , aldosterone, adrenaline, nor adrenaline
3. Pancreas	3. Glucagon, insulin, somatostatin, Pancreatic Polypeptide.

Q6) What are sex hormones? why are they named so? State their function.

Ans: Sex hormones are the hormones which affect the sexual development & maturation of an organism / individual.

They are named so because they are produced by the sex organs like testes & ovaries .Testes produce testosterone while as ovaries produce estrogen.

Functions:

Testosterone:

- a) It helps in development of facial hair, hair on body, pubic hair, etc.
- b) It helps in enlargement of penis & Scrotum
- c) It helps in development of shoulder bones & muscles.

Estrogen:

- a) It helps in development of breasts & milk secreting glands or mammary glands.
- b) It helps in development of bones in the pubic area.

Q8) Write notes on:

- a) **Adam's apple:** At puberty, the voice box or the larynx begins to grow .Boys develop larger voice boxes than girls which can be easily seen as a protruding part of the throat called Adam's apple.
- b) **Secondary sexual characters:-** These are the characters which are developed at puberty as a result of sex hormones , testosterone in boys & estrogen in girls & helps us to distinguish between boys & girls e.g. appearance of facial hair i.e. moustaches & beard in boys & development of breasts in girls.
- c) **Sex determination in the unborn baby:-** Every human being has 23 pairs of chromosomes in the nuclei of its body cells. However out of these 23 pairs of chromosomes, one pair of chromosomes is sex hormones. The two sex chromosomes named 'X' chromosomes and 'Y' chromosomes are present in the reproductive cells or gametes of the human being. In females all the gametes or eggs have **22+ X chromosomes** and in males, Some of the gametes or sperms have **22+Ychromosomes** and some have **22+Y chromosomes**.
- d) The sex of a baby is determined by the type of sex chromosomes present in the fertilized egg or zygote from which the baby develops.
- e) The baby developed from XX combination of sex chromosomes in zygote is a girl.
- f) While as the baby developed from XY combination of sex chromosomes in zygote will be a boy .

Subject: Bioscience
Class-8th

Chapter: (3) Conservation of plants and animals

Terminology

Biosphere: Biosphere is that part of the earth in which living organisms exist or which supports life.

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

Biodiversity: The term biodiversity means biological variety. Biodiversity refers to the variety of organisms, plants, animals and microorganisms found in a particular area or habitat.

Species: A species is a group of same kind of organisms which can interbreed to produce fertile offsprings.

Endemic Species: Endemic Species are those species of plants and animals which are exclusively found in a particular area e.g.

Wildlife Sanctuary: Total no = 78

The term sanctuary means a "place of safety". A wildlife sanctuary is a protected area which is created for protection of wild animals in their natural habitat/environment forests.

National Park: A National Park is a relatively large area of scenic beauty protected and maintained by the government to preserve flora and fauna i.e., plants and animals historic objects of the area and places of scientific interest and provide human enjoyment.

National Parks of India: Total=106

- i) Corbett National Park - Uttrakhand
- ii) Kanha National Park – Madhya Pradesh
- iii) Rathambore National Park – Rajasthan
- iv) Gir National Park – Gujarat

Call: 7889941369, 9797928917
E-mail: ravid157@gmail.com

- v) Kaziranga National Park – Assam
- vi) Sunderbans National Park – West Bengal
- vii). Dachigam National Park – Jammu & Kashmiri
- viii). Satpura National Park – Madhya Pradesh

Extinct Species: The species which no longer exist anywhere on the earth are called Extinct Species. In other words extinct species are those which have died out completely e.g., Dinosaur, Dodo, Cave Lion, Caspian tiger and Irish Tiger.

Endangered Species: The species which are facing the risk of extinction are called endangered species. In other words endangered species are animals and plants which are on the verge of vanishing from the earth e.g. tiger, Snow Leopard, Great Indian Rhinoceros, Asiatic Lion, Desert Cat, Lion-tailed Macaque, Kashmiri Stag.

Date of Project Tiger : April 1973

Exercise Questions

Fill in the blank

Q1. A place where animals are protected in their natural habitat is called wildlife sanctuary

Q2. Species found only in a particular area is known as endemic species.

Q3. Migratory birds fly to far away places because of Climatic changes.

Q6. Differentiate between the wildlife sanctuary and the biosphere reserve

Wildlife sanctuary	Biosphere reserve
1. Wildlife sanctuary is an area in which animals are protected from danger such as hunting, killing. Their habitat is also conserved.	1. Biosphere reserve is an area meant for the protection or conservation of biodiversity. It also helps in maintaining the culture of that area.
2. It provides suitable living conditions for natural flora and fauna. Pachmarhi wildlife sanctuary (M.P.), Gir National Park and Sanctuary (Gujarat), Bharatpur Sanctuary are the examples of wildlife sanctuary.	2. It helps in the conservation of various life forms such as plants, microbes, and animals. Pachmarhi Biosphere reserve (M.P.), Sunderbans Biosphere Reserve (West Bengal) are the examples of biosphere reserve.

b. Zoo and Wildlife sanctuary

Zoo	Wildlife Sanctuary
<p>It is facility in which animals are kept for public exhibition.</p> <p>It is an artificial habitat.</p>	<p>It is an area within which animals are protected from possible dangers such as hunting. Their habitat is, also conserved in the area.</p> <p>It conserves the natural habitat of the animals.</p>

c. Endangered and Extinct species

Endangered species	Extinct species
<p>It is a population of species that is on the verge of becoming extinct.</p> <p>Tiger, snow leopard, great Indian rhinoceros, Kashmiri Stag etc. are examples of endangered species.</p>	<p>It is a population of species that no longer exists. Hence, it is extinct.</p> <p>Dodo, Dinosaur, Cave Lion, Irish Tiger etc. are examples of endangered species.</p>

d. Flora and Fauna

Flora	Fauna
<p>It refers to all living plants in a particular place.</p> <p>Sal, teak, mango etc form the flora of Pachmarhi biosphere reserve.</p>	<p>It refers to all living animals in a particular place.</p> <p>Leopard, Wolf, Wild dog, etc form the fauna of Pachmarhi biosphere reserve.</p>

Q.10. Discuss the effects of deforestation on wild animals.

Trees and forests are natural habitats of wild animals. Deforestation will lead to the destruction of their habitats and makes animal species endangered and even causes their extinction.

Q.11. Discuss the effects of deforestation on the environment.

Deforestation causes an increase in the temperature of the surrounding due to the increase in the carbon dioxide level in the atmosphere. It also causes a decrease in the groundwater level, reduces soil fertility, decreased rainfall and a disrupted water cycle.

Q.12.Discuss the effects of deforestation on the Villages.

Solution: Deforestation alters the properties of soil and cause soil erosion which results in the exposure of lower, hard, rocky layers. The wash off of soil in nearby water bodies like rivers, lakes, etc. has caused the flood in many rural areas thereby disturbing the agricultural practices. Likewise, the people of rely on forest-products for food, wood, fuel, etc. Deforestation has reduced these resources and shelter less wild animals like tiger, leopard, elephant, etc. have become a serious threat for nearby villagers.

Q13.Discuss the effects of deforestation on the Cities (Urban areas).

Deforestation causes natural disaster threats in the cities such as reduced rainfall, increase in the temperature or floods. Increase in dust and CO₂ pollution and can lead to global warming which can affect the health of residents.

Q.14.Discuss the effects of deforestation on our planet Earth.

It can cause ecological imbalance, Imbalance in the level of carbon dioxide in the atmosphere, global warming, disturbance of water cycle, soil erosion, desertification of soil etc

Q.15.Discuss the effects of deforestation on the next generation.

Deforestation destroys the flora and affects the fauna therefore the next generation would not be able to see the wide variety of flora and fauna. Deforestation causes global warming and greenhouse effects which adversely affect the health of the next generation as they have to breathe in poisonous air.

Q.16. What will happen if we go on cutting trees?

Continuous cutting of trees can cause soil erosion and also can lead to desertification. cutting of trees will lead to the destruction of natural habitats of wild flora and fauna. If we cut trees, the level of carbon dioxide on the earth rises which would result in an increase in global temperature.

Q.17. What will happen if the habitat of an animal is disturbed?

Solution: The natural home or living place of a plant, animal or other organism is called as its habitat. Animals get a sufficient amount of food, water, shelter, etc. from their habitat. If their habitat is disturbed, then they have to migrate to some other place in search of food, water, shelter, etc. and when they do not get adapted to the new place, it affects their survival. It causes loss of wild animal biodiversity.

Q.18. What will happen if the top layer of soil is exposed?

Solution: Deforestation is a major cause of soil erosion. Removal of the top layer of soil exposes the lower hard rocky layer of the soil. This type of soil is less fertile and it contains less humus. If the soil erosion occurs continuously, then it will make the land barren or infertile causing desertification.

Q.19. Why should we conserve biodiversity?

We should conserve biodiversity because it maintains ecosystem stability. It ensures availability of useful plants and maintains quality of our environment. It ensures availability of useful plants and maintains quality of our environment. It ensures availability of useful plants and maintains quality of our environment. Any damage to biodiversity will threaten the existence of human beings as well as other living organisms.

Q.20. Protected forests are also not completely safe for wild animals. Why?

Solution: Protected forests are also not completely safe for wild animals because even in them human interference is required for managing necessities, such as food, water, etc. Poaching is a major existential threat to numerous wild organisms worldwide and is an important contributor to biodiversity loss. Also, the populations of wild animals need to be monitored and managed by humans. Further, protected forests allow tribal interference. The tribals continue using resources from the forests for their sustenance.

Q.21. Some tribals depend on the jungle. How

Tribal people have been living in or around the jungle for many ages. They depend on the jungle for their basic needs of food, clothing, shelter, medicines, etc. Thus, tribals depend on jungles for their daily requirements. Forests even support their livelihood.

D) What is deforestation and what are its causes and consequences?

Ans: Deforestation: The clearing of forests i.e, the cutting down of forest trees over a wild area is called deforestation.

Causes of deforestation: The deforestation takes place because

- i. Forests are cut down to obtain wood for using as fuel, for making furniture, doors, windows etc
- ii. The forest trees are cut down to obtain wood for making paper.
- iii. The forests are cut down to get land for building houses, factories, roads and dams etc.
- iv. Some natural causes like forest fires and severe droughts.

Consequences of deforestation:

- (i) Soil erosion
- (ii) Loss of biodiversity
- (iii) Floods and droughts
- (iv) Climate change due to global warming
- (v) Disruption of water cycle

Q.23.What is the Red data book?

Ans. Red data book is a source book or document established by the International Union Of Conservation Of Nature (IUCN). It keeps the record of all the endangered species of plants and animals. Red data book is beneficial for providing detailed information for studies and researches.

Q.24. What do you understand by the term migration?

Solution: Migration is the seasonal movement of animals from one place to another. It takes place due to the seasonal changes, in search of food, and in search of a suitable and favourable place for reproduction. Species of animals that travel long distances at certain times of the year in order to escape unfavorable conditions or to find more suitable conditions for feeding and reproducing are called migratory species.

Q.25. 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?

Discuss and prepare a brief report.

Ans: Trees in the forest are cut for procuring land for cultivation, building houses and factories and making furniture or using wood as fuel. Increasing demands of the human population don't justify cutting down of trees. The reduction in the number of trees have several consequences on the environment. Balance of oxygen

Call: 7889941369, 9797928917

E-mail: javaid167@gmail.com

and carbon dioxide in the atmosphere is maintained by plants. Deforestation results in decreased soil fertility and elevated levels of carbon dioxide in the atmosphere. An increase in the average temperature of the atmosphere or global warming, disrupted water cycle, reduced rainfall, and drought.

Q.27. Explain how deforestation leads to reduced rainfall.

Solution: Trees play a vital role in maintaining water cycle in environment and also maintaining the balance of carbon dioxide and oxygen in the atmosphere. Deforestation has resulted in a decline in evapotranspiration and directly affects the level of carbon dioxide in the air. Increased level of Carbon dioxide retains heat radiations in the atmosphere causing global warming. The global warming affects the water cycle and alters rainfall patterns. This decline in rainfall might cause drought.

Q.10. What is Recycling of paper? Why should be paper saved? Prepare a list of ways by which

you can save paper?

Ans: Recycling of Paper: The term recycling of paper, means to process the waste paper to make new paper so that it can be used again

Need to save paper: We should save paper to save the forest trees. Paper is made from wood pulp that is produced from the wood of forest trees. It has been estimated that 17 full grown trees are needed to make 1 ton of paper.

Paper can be recycled five to seven times for use. We should save, reuse and recycle the paper to save trees/forests, chemicals, water and the energy needed during the manufacturing of paper.

List of ways to save paper:

- 1) Do not throw paper here and there.
- 2) Waste paper should be collected and sent for recycling.
- 3) Use chalk and slate for rough work.
- 4) Make toys, caps, envelopes out of used paper.

Subject-bioscience

Class-8th

(4)Food Production and Management

BASIC TERMINOLOGY

- 1) **Agriculture:** The term agriculture is derived from two Latin words 'agar' which means field and 'culture' which means to cultivate. In broad sense, agriculture is the study of cultivation of land, breeding and management of plants and animals that are useful to mankind
- 2) **Horticulture:** It is the branch of agriculture which deals with the study of growing vegetables, fruits and flowers.
- 3) **Pisciculture:** Pisciculture is the practice of keeping and rearing of fish on a large scale for its production. It is a flourishing industry in our country.
- 4) **Apiculture:** Apiculture is the practice of keeping and rearing of honey bees on large scale to get honey and wax. The place used for rearing honey bees is called an Apiary.
- 5) **Sericulture:** Sericulture or Sericulture or silk farming is the cultivation or rearing of silk worms to produce silk on large scale.
- 6) **Animal Husbandry:** The branch of agriculture which deals with the feeding, shelter, health and breeding of domestic animals is called Animal Husbandry.
- 7) **Kharif Crops:** Those crops which are grown or sown in the rainy season between June and October are called Kharif Crops. These crops are dependent upon the south western monsoon. e.g. Paddy, Maize, Millet (Bajra, Jawar), Soyabean, Groundnut, Pulses.
- 8) **Rabi Crops:** Those crops which are grown/sown in winter season between October and March and are not dependent upon the monsoon are called Rabi crops e.g. Wheat, Mustard, Gram, Peas, Linseed, Gram etc.
- 9) **Zaid Crops:** Those crops which are grown in the summer season between March & June are called Zaid crops e.g. Moong, Cucumber, Watermelon, Bitter gourd, Brinjal, Tomato, Radish.

Exercise Questions

i) Name the following

Q1.Five requirements essential for obtaining good crop production?

Ans. The requirements essential for obtaining good crop production are

- i) Right kind of soil.
- ii) Good quality seeds.

Call 7889941369, 9797928917

e-mail javaid167@gmail.com

- iii) Right amount of water.
- iv) Protection from weeds and pests. v. Proper implements.

Q2. Two types of fertilizers.

Ans. The two types of fertilizers are Nitrogen, phosphate and potassium (NPK) fertilizers and calcium ammonium nitrate (CAN).

Q3. Some chemicals used to protect crops from insect pests and weeds.

Ans. Chemicals used to protect crops from insects are called insecticides e.g. Malathion, BHC (Gammexane), Dimecron and polythion. The chemicals used to protect crops from weeds are called weedicides e.g. Butachlor, 2,4-dichlorophenoxyacetic acid, simazine etc.

Q4. Some animal products.

Ans. The various animal products are Silk, Honey, Milk, Wool and hides.

Q5. Members of the colony of bee.

Ans. The members of the bee colony are.

Queen (Fertile female), Drone (fertile male), Workers (sterile females).

II) Fill in the blanks:

1. A Trowel (khurpi) is used to remove weeds from the soil.

2. A Clod crusher is used to trowel the soil by breaking the lumps of soil after preliminary ploughing.

3. Kharif crops are sown during the month of June-July.

4. Paddy seeds are not sown directly into the soil.

5. Rabi crops are harvested during the month of March-April.

6. The practice of taking the seedlings from the nursery to the main field is known as Transplanting field.

7. Pearls are used in jewellery.

8. Honey contains 17% water and 78% sugar with minerals.

9. The hen houses are called Pens.

10. Murrah and Jaffarabadi are well known breeds of Buffalo.

III) Answer the following questions in only one word or in a figure:

1) What is the process of turning and loosening soil called Tilling or ploughing?

2) Which implement is used for tilling soil? Plough or tiller

3) Which implement is used for breaking up the large lumps of soil? Clod crusher

4) What is the implement used for sowing called? Seed drill

5) What is the top part of the drill called? Seed Bowl

6) What is an egg laying bird called? Broody hen

Call 7889941369, 9797928012
e-mail javaid167@gmail.com

7) Name the members of the bee colony?

Queen (Fertile female), Drone (fertile male), Workers (sterile females).

8) What material is used to cover the floor of a hen house? Straw.

9) What is the common food of poultry chicken? Grains and oil cakes.

10) Which bee is responsible for laying eggs. Queen(fertile female)

IV) Give the scientific reasons for the following:

Q1. Grains, pulses, vegetables and fruits should be used in our daily life?

Ans. Plant products like Grains, pulses, fruits and vegetables should be used in our daily life because they provide carbohydrates for energy, proteins for growth and development and vitamins for normal body function.

Q2. The soil should be loosened before seeds are sown?

Ans. The soil should be loosened (turned) before sowing because it allow young roots to penetrate the soil easily and also helps in the growth of several soil microbes, earthworms which enrich the soil with humus and other essential nutrients.

Q3. Seeds should be sown at a proper depth in the soil?

Ans. Seed germination requires oxygen and water which are available in loose soil. If seeds are sown deep they fail to germinate because of absence of oxygen and water. Therefore seeds should be sown at a proper depth in soil.

Q4. Fruits and vegetables should be washed throughly before eating?

Ans. Fruits and vegetables are covered by poisonous chemicals like insecticides and fungicides which are harmful to our body. These chemicals can cause liver damage, cancer, brain disorders etc. Therefore we should wash fruits and vegetables before eating.

Q5. Grains are dried throughly before they are stored?

Ans. The Harvested food grains normally contain more moisture than required for the storage. The higher moisture content in the stored grains promote fungal growth (Moulds) which spoil the seeds. Therefore seeds are dried throughly before storage.

V) Answer the following questions:

Q1. What are the requirements of farming which would lead to higher yield of crops?

Ans. The various requirements of farming for higher crop yield are:

i) The preparation of right kind of soil.

ii) Availability of good quality seeds.

iii) The right amount of water should be available at the right time.

- iv) Adding manure and Fertilizers to supply essential minerals to crops.
- v) Removal of unwanted plants (weeds) At proper time.
- vi) Protection of crops from birds ,insects and rodents.

Q2.What is tilling?How is it done?

Ans. The process of loosening and turning of soil before sowing is called **tilling** or ploughing.Tilling is done by using implements like cultivator,Plough or Tiller. Cultivators are driven by tractors and ploughs by animals.

Q3.Write a short note on the process of sowing?

Ans. Once the soil is prepared, seeds are sown in it. The process of scattering or putting seeds in the field soil is called sowing.Sowing by hands is called broadcasting. Nowadays, seed drills that make the use of tractors are used for sowing seeds. This tool disperses seeds uniformly and sows seeds at proper depth and distance . Sowing by this method saves time and also protects the seeds from birds. The seeds that are selected for growing should be of good quality and healthy.

Q4.What are manures? What are their different types?

Ans. Manures are organic substances or natural fertilizers obtained by decomposition of plant waste and animal excreta like cow dung,poultry waste by the action of microorganisms.The various types of manures are Farmyard manure(FYM), green manure, compost, and poultry manure.

Important Types of Manures:

Farmyard Manure (FYM): It is the most valuable manure made from the organic matter such as remnants of straw, leaves and excreta of cattle. It is commonly applied to the soil to make it fertile and soft.

Green Manure: It is made from the leaves of green plants. This improves the physical structure as well as soil fertility.

Compost Manure: It is a rotten mixture of all the cattle shed wastes and all the available refuse..

Q5. What is a fertilizer? Explain its importance.

Ans. A chemical fertilizer is a salt or an organic compound containing the necessary plant nutrients like nitrogen phosphorus or potassium, to make the soil more fertile. Some examples of fertilizers are Urea, Ammonium Sulphate, Superphosphate, Potash and NPK.

They are important because

i) They are easy to transport.

ii) They are soluble in water hence easily absorbed by plants.

- iii) They contain nutrients in concentrated form and are nutrient specific.
- iv) They help in quick replenishment of nutrients in soil.

Q6. What are broadcasting and transplanting?

Ans. Broadcasting:-The process of scattering the seeds by hands during sowing is called Broadcasting.

Transplanting:-Seeds of some crops like paddy are first sown in nurseries. After growth of seedlings, they are transferred to main field. This process of transferring of seedlings(little plants) from nurseries to the main field by hands called transplanting.

Q7. What is the difference between Manure and fertilizers?

Ans.

Fertilizer	Manure
<ul style="list-style-type: none">1. Fertiliser is commercially manufactured in factories.2. Fertilizer is an inorganic salt .3. A fertiliser does not provide any humus to the soil.4. They are compact and easy to store and transport.5. Its excessive use causes water pollution.6. They are soluble and rapidly absorbed by plants.7. They are rich in minerals like N,P,K.	<ul style="list-style-type: none">1. Manure is a natural substance Obtained by the decomposition of Cattle dung human excreta and plant wastes.2. Manure is organic substance.3. Manure provides lots of humus to the soil and increases soil fertility.4. They are bulky and difficult to transport and store.5. It protects the environment .7. They are not very rich in nutrients like N,P,K.

Q8. Why are weeds harmful? What is used to remove them?

Ans. Weeds are unwanted plants which grow of their own along with the cultivated crop plants. weeds are harmful because they compete with the crop plants for nutrients, light, and space. As a result, crop plants get lesser nutrients, light, and space for their development. This in turn, reduces their productivity.

Some common weeds found in wheat and rice fields are a. Wild oat b. Grass (Ghass) c. Amaranthus (Chaulai) d. Chenopodium (Bathuae).

Weeds are removed either manually or by spraying weedicides like simazine or 2,4-D (2, 4-dichlorophenoxy acetic acid).

Q9. What are insecticides? Give examples.

Ans. They are the chemical poisonous substances which are used to kill insect pests Beetles, moths, weevil, borers etc. Dimecron, Malathion, Polythion and Benzene hexa chloride (BHC) are examples of some insecticides.

Q10. How do insecticides protect crops?

Ans.. Insecticides protect plants by killing insects or pests as well as their larvae around crops without affecting crops.

Q11. Which are the two main seasons in India for crop cultivation?

Ans. The two main seasons in India for crop cultivation and harvesting are

- i) Kharif season :- Crop season in which crop is sown in June and July and harvested after monsoon season.,
- ii) Rabi season :- crop season in which crop is sown in October to December and harvested in March or April.

iii) Q12. Name some Harvest festivals in India?

Ans. The various harvest festivals in India are Pongal, Baisakhi, Bihu, Nabanya etc.

Q13. Name four factors responsible for improvement of crops.

Ans. The four factors responsible for crop improvement are.

I) Plant breeding

ii) soil improvement

iii) protection from pests and weeds.

iv) Proper storage.

Q14. Write a short note on the process of harvesting.

Ans. The cutting and gathering of a mature crop manually or by machines is called

harvesting. The Rabi and Kharif crops ripe at the end of their season. Manual

harvesting is done with a cutting tool called Sickle. Nowadays modern machines

Q15. Why does the farmer rotate crops in the field?

Ans. The farmer rotates crops in the field because crop rotation improves fertility of

the soil and result in increase in food production.

Call: 7889941369, 9797928917

e-mail javaid167@gmail.com

Q16. What do you understand by mixed cropping?

Ans. The process of growing two or more different crops together in the same field is called mixed or multiple cropping. Examples:- Maize with curdbean, Rice and Jowar, cotton with red gram.

Q17. Why are the fields sometimes allowed to remain fallow ?

Ans. The fields are sometimes allowed to remain fallow because during this period Humus of the soil may increase and promote growth of microbes to replenish nutrients of soil.

Q18. List the importance of fish in our life?

Ans.

- i) Fish is used as a food.
- ii) Fish is a cheap and rich source of proteins.
- iii) Fish meat contains less fat, iodine and good amount of vitamin A and D.
- iv) Rearing of fishes is a source of employment.

Q19. What is the nutrient value of Honey?

Ans. Honey has high food value. It is a natural tonic composed of 17% water, 78% Sugars (sucrose, glucose). It also contains vitamins, potassium, calcium and enzymes.

Q20. How are domesticated animals useful to us?

Ans. The domesticated animals are known as Livestock. They provide us milk, hides, flesh, meat and eggs. They are also used for labour in carting, tilling (ploughing), transportation and irrigation.

INTEXT QUESTIONS

Q1. What is livestock?

Ans. A farm where domesticated animals are kept, raised for use and profit.

Q2. Name any four poultry birds.

Ans. Hen, duck, turkey and geese

Q3. What is a broody hen?

Ans. An egg laying bird is called a broody hen.

Q4. Name any two breeds of:

- (a) Cows (Ans). Sahiwal and Sindhi
- (b) buffaloes (Ans) Murrah and Jaffarabadi