

PARAGON CONVENT SCHOOL

SECTOR : 24 B, CHANDIGARH

LESSON - 9

REPRODUCTION IN ANIMALS

Summary

- There are two different modes of reproduction: sexual and asexual.
- Sex cells are called gametes. Sperms are produced by the male and ovum by the female.
- An ovum and a sperm combine together to form a zygote.
- There are two types of fertilisation: internal and external.
- The sex of the newborn baby is determined at the time of the fertilisation by the chromosome carried by the sperm.
- Animals can be viviparous or oviparous depending upon how they produce their offsprings.
- In asexual reproduction, the offsprings produced are exactly identical to their parents. Types of asexual reproduction: binary fission and budding.

Multiple Choice Questions (Page No. 128)

1. (a) 2. (b) 3. (c) 4. (b)

Multiple Choice Questions (Page No. 132)

1. (a) 2. (a) 3. (c) 4. (a)

SECTION A

Oral questions

Q1.- What is meant by reproduction?

Ans.- The production of new individuals by their parents is called reproduction.

Q2.- Why is reproduction important?

Ans.- Reproduction is important for the survival of a species on the earth. It ensures the continuity of life on the earth.

Q3.- What are the two general methods of reproduction in animals?

Ans.- Sexual and asexual

Science quiz

Q1.- What type of reproduction takes place in amoeba?

Ans.- Asexual reproduction

Q2.- Explain IVF.

Ans.- In vitro fertilisation

Q3.- Where does the embryo get embedded in the humans?

Ans.- During implantation, the embryo gets embedded in the inner lining of the uterus.

WORKSHEET

Tick (\checkmark) the correct options:

1. (d) 2. (d) 3. (c) 4. (b) 5. (c)

Circle the odd ones. Give reasons for your choice:

1. Fishes Insects Reptiles Mammals Birds

Ans.- Mammals - These are viviparous, whereas others are oviparous

2. Testes Fallopian tube Vas deferens Urethra Penis

Ans.- Fallopian tube - It is a part of female reproductive system, whereas others are parts of male reproductive system

3. Vagina Uterus Fallopian tube Testes Ovary

Ans.- Testes - These are the part of male reproductive system, whereas others are

parts of female reproductive system.

Fill in the blanks

1. asexual 2. ova 3. external 4. foetus

State whether the following statements are true (T) or false (F)

1. True 2. False 3. False

SECTION B

Multiple Choice Questions

1. (a) 2. (b) 3. (c)

Very Short Answer Questions

Q1.- Name two animals each, which reproduce by a) asexual mode b) sexual mode.

Ans.- (a) Amoeba, Paramecium, yeast, hydra

(b) Frogs, human beings, fishes, cows, dogs, horses

Q2.- Name the female sex hormone(s).

Ans.- Oestrogen, progesterone

Q3.- What is fertilisation inside the body of a female called?

Ans.- Internal fertilisation

Short Answer Type - I Questions

Q1.- What is meant by external fertilisation? Name two animals in which external fertilisation takes place.

Ans.- The fertilisation which occurs outside the female's body is called external fertilisation. It takes place in frogs and fishes.

Q2.- What are viviparous animals? Name any two viviparous animals.

Ans.- The animals that give birth to young ones are called viviparous animals.

Humans, Cows, Cats and dogs are viviparous animals.

Q3.- Give two differences between sexual and asexual reproduction.

Ans.-

<u>Sexual reproduction</u>	<u>Asexual reproduction</u>
1. It produces new animals from the existing two parents by the fusion of their gametes.	1. It produces new animals without the involvement of gametes.
2. Formation of zygote takes place.	2. No zygote is formed.
3. Eg. Fishes, frogs, cows, dogs, horses, human beings	3. Eg. Amoeba, hydra, yeast Euglena, paramecium

Short Answer Type-II Questions

Q1.- What is the role of fallopian tubes and testes?

Ans.- Fallopian tube (oviduct) is a thin and coiled muscular tube with a funnel - shaped opening near ovaries. It joins the uterus to the ovary. The fertilisation of egg (or ovum) by the sperm takes place in the fallopian tube.

Testes produce male gametes called sperms and male sex hormone called testosterone.

Q2.- Define foetus. After how many weeks of development, is a human embryo said to become a foetus?

Ans.- The stage of embryo in which all the body parts can be identified is called foetus. After 8 weeks of development, a human embryo is said to become foetus.

Q3.- How does an Amoeba reproduce by binary fission? Explain.

Ans.- In binary fission, the parent organism splits or divides to form two new organisms of the same kind. In binary fission of a fully grown Amoeba, the nucleus lengthens first and divides into two parts. After that, the cytoplasm divides

into two parts around each nucleus and forms two daughter cells. In this way, a single parent Amoeba divides to form daughter Amoebae, which grows to its full size and divides again.

Q4.- Nitika's aunt is unable to give birth to a baby. She decides to adopt a girl child named Puja from an orphanage.

a) Give one reason due to which Nitika's aunt is unable to have a baby.

b) What can we learn from Nitika's aunt?

Ans.- (a) Blockage of fallopian tubes

(b) We can adopt the orphans and give them love, care and good education. There are many children in the world who need love and care. By giving these children whatever they need, we can set an excellent example and serve the society. The girls and boys are equal and we should give equal opportunities to both.

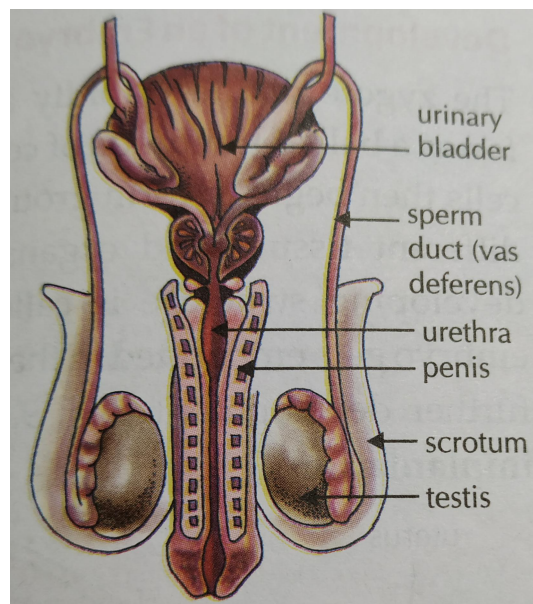
Long Answer Questions:

Q1.- a) Draw a neat and well labelled diagram of the male reproductive system in humans.

b) Name the organs of male reproductive system and give their functions.

Ans.- a)

Male reproductive system



b) The male reproductive system consist of following organs :

(i) Testes - The function of testes is to produce male gametes called sperms and the male sex hormone called testosterone.

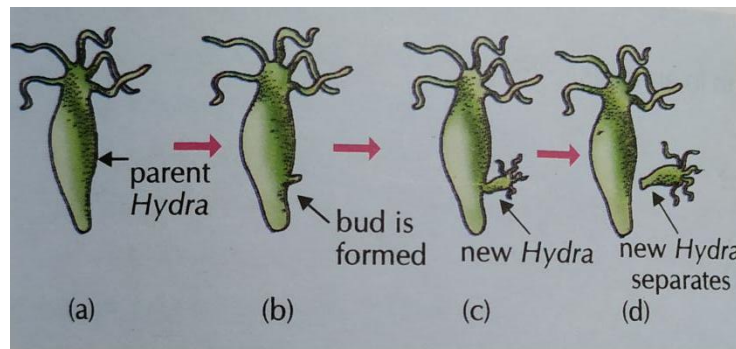
(ii) Vas deferens - It carries sperms to the urethra by the muscular action of its walls.

(iii) Urethra - It carries urine from the bladder as well as semen (consisting of sperms) from the vas deferens through the penis.

(iv) Penis – It injects sperms into the vagina of the female's body.

Q2.- With the help of diagrams, explain reproduction in Hydra by budding.

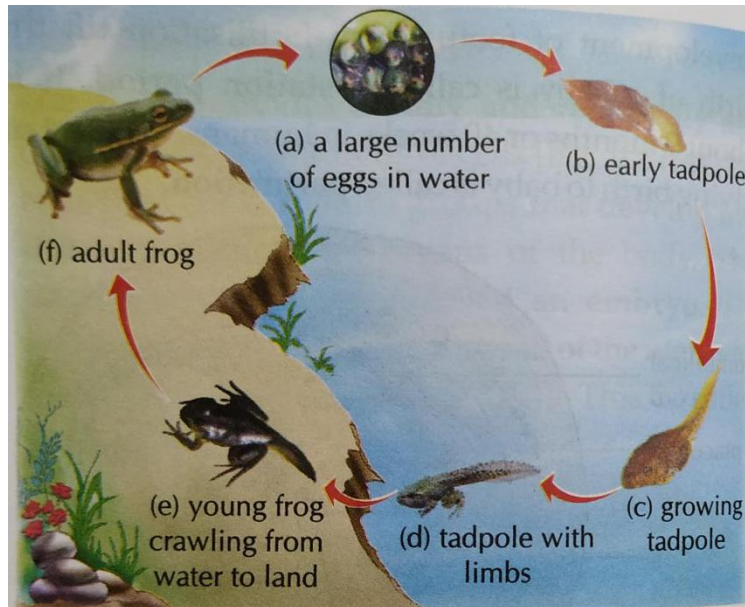
Ans.- In Hydra, first a small outgrowth called a 'bud' grows on the side of its body. This bud then gradually grows to form a small Hydra by developing a mouth and tentacles. The tiny daughter Hydra detaches itself from the body of the parent Hydra. This tiny Hydra grows to its full size by eating food.



Budding in Hydra

Q3.- Explain the life cycle of frog.

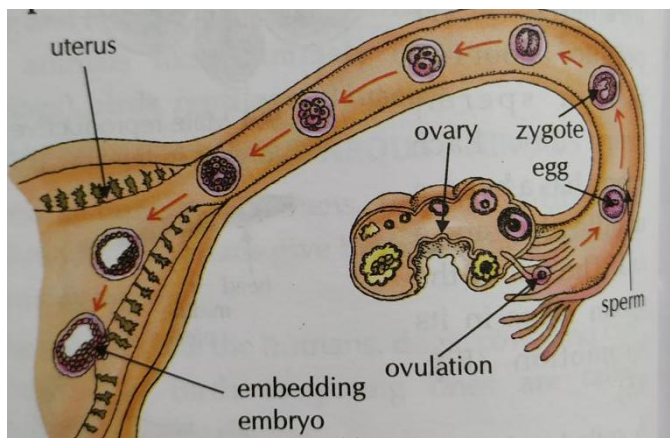
Ans.- An adult female frog lays a large number of eggs in water. After some time, the eggs hatch into small fish-like larvae called tadpoles. Tadpoles grow larger as they feed on algae and bits of plant materials. The tadpole grows hindlimbs. After the development of both pairs of limbs, the young frog crawls on the land. The frog reabsorbs the rest of its tail and continues to grow until it reaches its adult body size.



Life cycle of a Frog

Q4.- Discuss the development of zygote in human beings.

Ans.- After fertilisation, the zygote is formed. The zygote divides rapidly and repeatedly to form a ball of hundreds of cells. The cell then begins to form groups that develop into different tissues and organs of the body. This developing structure is called embryo. The embryo gets embedded in the walls of the uterus for further development. The embryo continues to develop in the uterus and gradually develops body parts such as hands, legs, eyes, head etc. This stage of the embryo in which all the body parts can be identified is called foetus. When the development of foetus is complete, the mother gives birth to the baby.



Development of Zygote