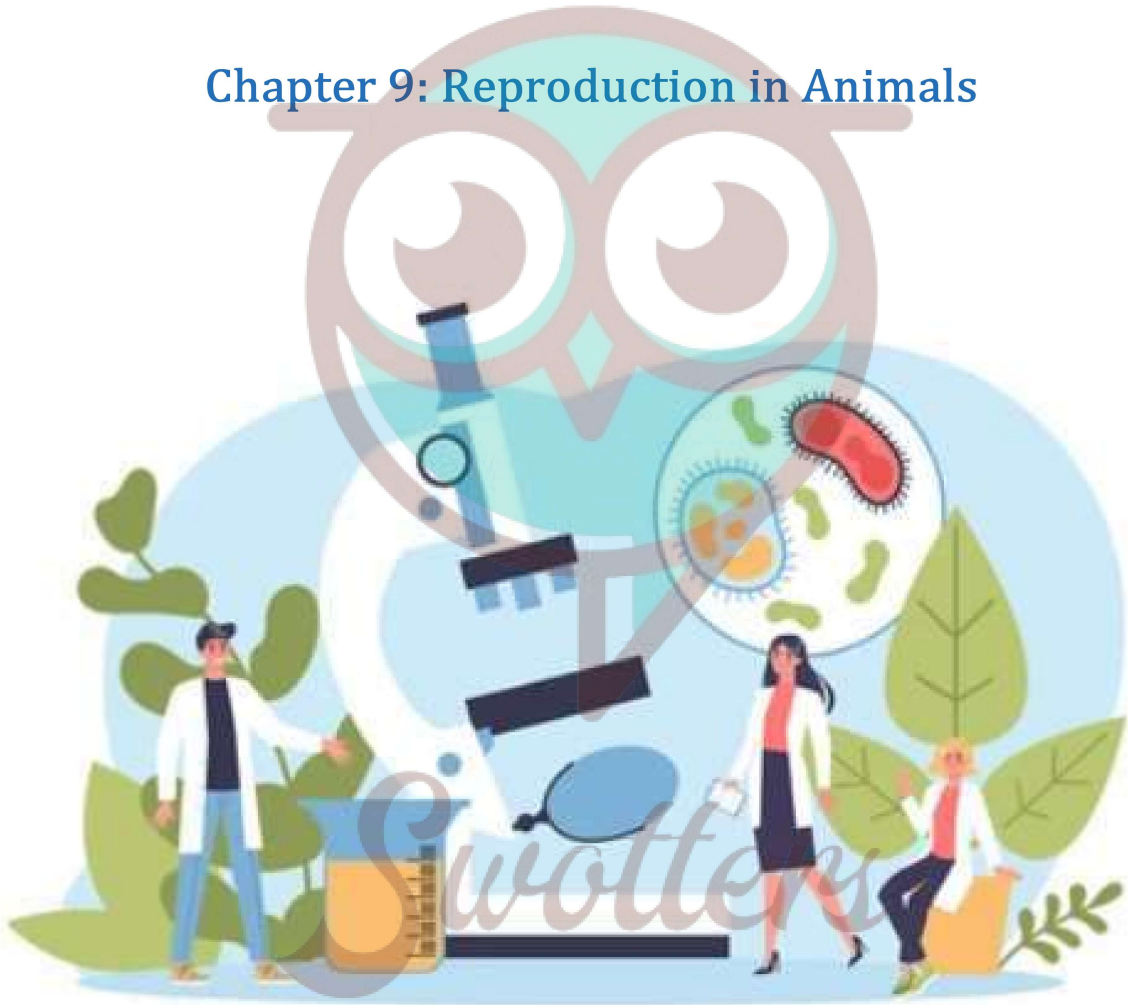


# SCIENCE

## Chapter 9: Reproduction in Animals



## Important Questions

### Multiple Choice questions-

Question 1. The fusion of a male and female gamete results in the formation of:

- (a) Egg
- (b) Zoospore
- (c) Sperm
- (d) Zygote

Question 2. The developing zygote is called:

- (a) baby
- (b) foetus
- (c) embryo
- (d) none of these

Question 3. The stage of the embryo in which all the body parts can be identified is called:

- (a) baby
- (b) foetus
- (c) baby embryo
- (d) none of these

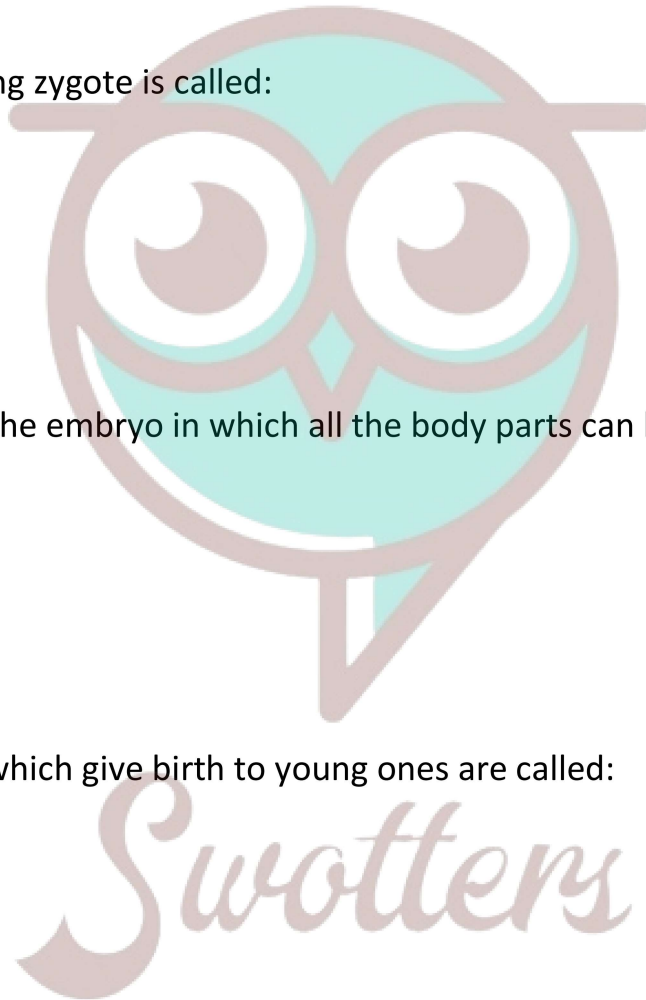
Question 4. The animals which give birth to young ones are called:

- (a) viviparous
- (b) oviparous
- (c) hermaphrodites
- (d) none of these

Question 5. The animals which lay eggs are called:

- (a) viviparous
- (b) hermaphrodites
- (c) oviparous
- (d) none of these

Question 6. A fertilised ovum develops into a baby in the:



- (a) vagina
- (b) fallopian tubes
- (c) uterus
- (d) ovary

Question 7. Which of the following is a hermaphrodite animal:

- (a) elephant
- (b) cow
- (c) dog
- (d) earthworm

Question 8. Which of the following requires both parents for reproducing:

- (a) hydra
- (b) amoeba
- (c) paramecium
- (d) human

Question 9. Which of the following is involved in the sexual reproduction ?

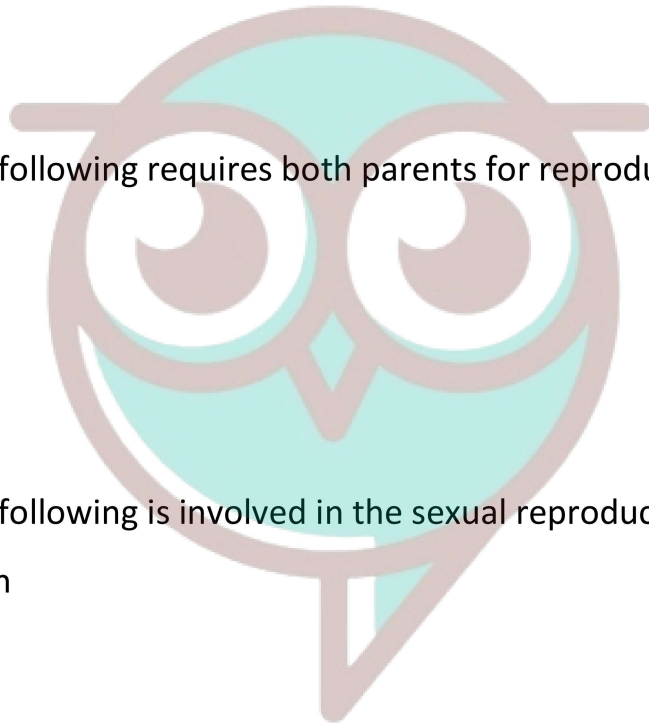
- (a) vegetative propagation
- (b) multiple fission
- (c) binary fission
- (d) fertilisation

Question 10. The organism which has both the male and female sex organs present in the same body is called:

- (a) unisexual
- (b) multisexual
- (c) hermaphrodites
- (d) none of these

Question 11. The process leading to the fusion of the gametes in plants and animals is called:

- (a) growth
- (b) fertilisation
- (c) development



Swotters

(d) fusion

Question 12. Amoeba reproduce by:

(a) budding

(b) multiple fission

(c) vegetative propagation

(d) binary fission

Question 13. Hydra reproduce by:

(a) budding

(b) multiple fission

(c) vegetative propagation

(d) binary fission

Question 14. External fertilisation takes place in:

(a) humans

(b) fish

(c) hens

(d) dogs

Question 15. Test tube babies grow in:

(a) mother's uterus

(b) mother's oviduct

(c) none of these

(d) test tubes



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### Very Short :

1. Name the processes which are essential for the survival of individuals.
2. What do you mean by reproduction?
3. What are different modes of reproduction?
4. Define the term sexual reproduction.
5. What is male gamete?
6. What is female gamete?
7. Name the male gamete.

8. What is name of the reproductive organ which produces sperm?
9. Name the female gamete.
10. Which organ produces the ovum?

### Short Questions :

1. Define Sexual reproduction.
2. Define Fertilization.
3. What is Zygote?
4. Define internal fertilization.
5. What is in-vitro fertilization?
6. How do the hundreds of eggs of frog remain protected even if laid on open aquatic system?
7. What is External fertilization?
8. Give two examples of organisms showing both internal and external mode of fertilization.
9. What are the common difference between zygote and embryo? .
10. Define Embryo.

### Long Questions :

1. What do you mean by reproduction? Describe various modes of reproduction.
2. What do you mean by metamorphosis? How does metamorphosis take place in frog? Explain with a diagram.
3. Describe the male reproductive organs with the help of a labelled diagram.
4. Describe female reproductive organs with the help of a labelled diagram.
5. Explain with a diagram the development of an embryo.

**Answer**

### MCQ Answer

Answer

(d) Zygote

The fusion of a male and female gamete results in the formation of zygote.

Answer

(c) embryo

The developing zygote is called embryo.

Answer

(b) foetus

The stage of the embryo in which all body parts can be identified is called foetus.

Answer

(a) viviparous

The animals which give birth to young ones are called viviparous.

Answer

(c) oviparous

The animals which lay eggs are called oviparous.

Answer

(c) uterus

A fertilised ovum develops in to a baby in the uterus.

Answer

(d) earthworm

Earthworm is a hermaphrodite animal.

Answer

(d) human

Earthworm is a hermaphrodite animal.

Answer

(d) fertilisation

Human requires both parents (mother and father) for reproducing.

Answer

(d) none of these

Fertilisation is involved in sexual reproduction. Vegetative propagation, multiple fission and binary fission are methods of asexual reproduction.

Answer

(b) fertihsation

Fertilisation is the process leading to the fusion of the gamates in plants and animals

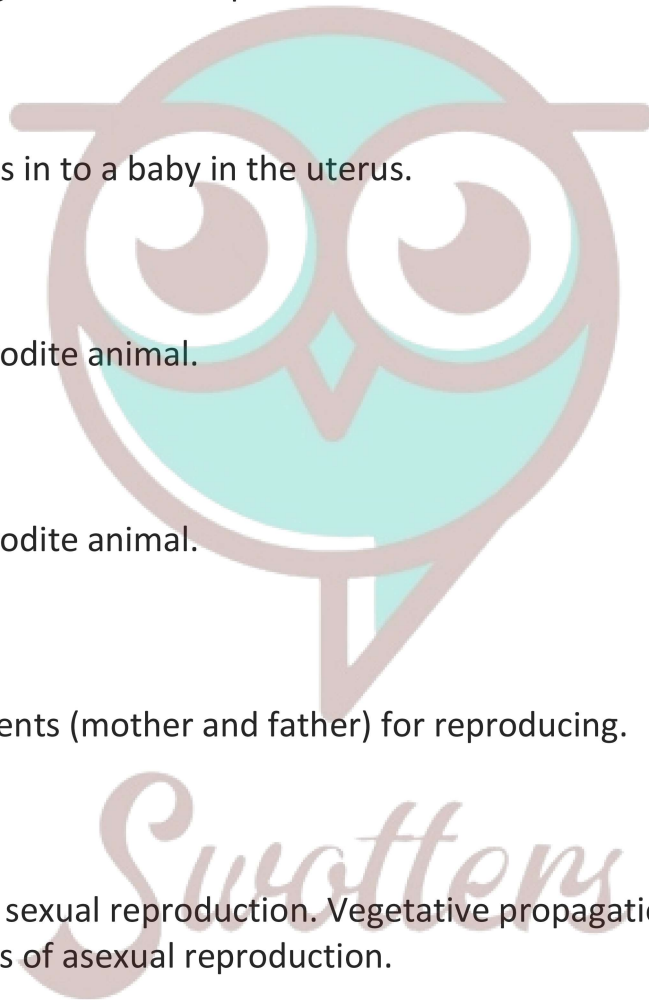
Answer

(d) binar fission

Amoeba reproduce by binary fission.

Answer

(a) budding



Hydra reproduce by budding.

Answer

(b) fish

External fertilisation takes place in fish.

Answer

(a) mother's uterus

Test tube babies grow in mother's uterus.

### Very Short Answer-

1. Answer: Digestion, circulation, excretion and respiration.
2. Answer: The process which is essential for the continuation of species is called reproduction.
3. Answer: (i) Sexual reproduction (ii) Asexual reproduction.
4. Answer: The process of reproduction in which fusion of male and female gametes takes place is called sexual reproduction.
5. Answer: The reproductive cell produced by male reproductive organs is called male gamete.
6. Answer: The reproductive cell produced by female reproductive organs is called female gamete.
7. Answer: Sperm.
8. Answer: A pair of testes.
9. Answer: Ovum or egg cell.
10. Answer: A pair of ovaries.

### Short Answer-

1. Answer: Sexual reproduction: Reproduction which begins with the fusion of male and female gamete is called Sexual reproduction.
2. Answer: Fertilization: Fusion of egg with sperm is called Fertilization.
3. Answer: Fusion of male and female gametes produce fertilize egg which is Zygote.
4. Answer: Fertilization which takes place inside female body is called internal fertilization.
5. Answer: Fertilization done by doctors, outside the body, is called In-vitro fertilization?
6. Answer: A layer of Jelly holds the eggs together and provides them protection.
7. Answer: The type of fertilization in which fusion of male and female gametes takes place outside the body of female is called External fertilization. It takes place in animals like frog,

lizard, fish etc.

8. Answer: Internal fertilization: Human and Hen.

External fertilization: Frog and Starfish.

9. Answer: Zygote: Single fertilizes egg and found in oviducts.

Embryo: Ball of cells and gets embedded in the wall of uterus for development.

10. Answer: Zygote divides repeatedly to give ball of cell called Embryo.

## Long Answer-

1. Answer:

Reproduction is an important process which is responsible for the continuity of life on the planet earth. In this process, an individual produces young ones of the same species. It helps in increasing the population of the same species on the earth, generation after generation. This is the fundamental feature which ensures the existence of all life forms on the earth. There are two modes of reproduction:

(i) **Sexual reproduction:** In this type of reproduction, both male and female parents are involved and they produce different gametes called male gametes or sperms and female gametes or ova (egg) respectively. Both fuse to form zygote which finally develops into foetus. For example, mammals including human beings higher invertebrates and all vertebrates undergo sexual reproduction.

(ii) **Asexual reproduction:** In this type of reproduction, only single parent is involved and gametes or sex cells are not produced. Budding, binary fission, etc., are different methods of asexual reproduction. Lower organisms like Hydra, Amoeba, yeast, etc., undergo asexual reproduction.

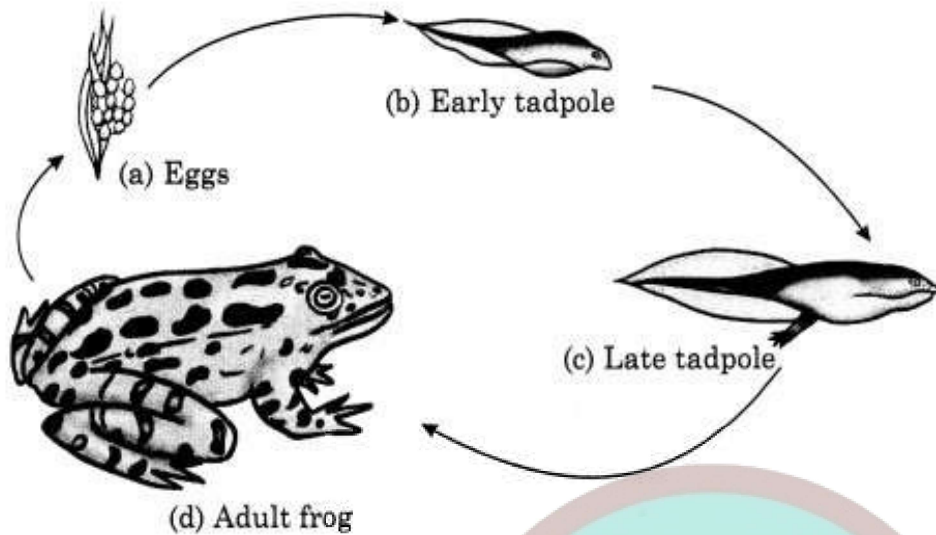
2. Answer:

The transformation of the larva into an adult through drastic (sudden or abrupt) changes is called metamorphosis. For example, a moth emerging out of the cocoon, an adult frog from a tadpole, etc., undergo metamorphosis.

Frog undergoes through three stages during its life cycle in which eggs laid down by frogs transform into tadpoles (larva) and finally into an adult following the process of metamorphosis.

The following diagram clearly shows this process.

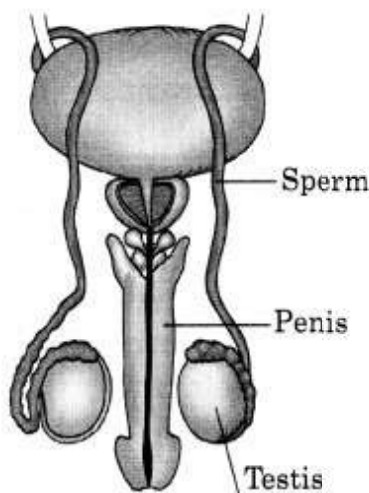




► Fig. 9.13 Life cycle of frog

3. Answer:

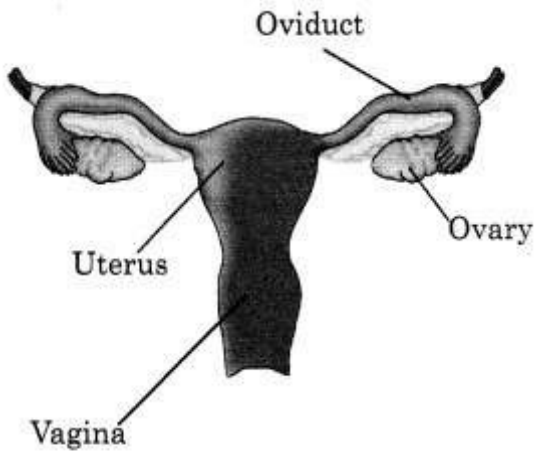
The male reproductive organs mainly consist of a pair of testes, two sperm ducts (vas deferens) and a penis. Male gametes called sperms are produced by the testes. Though the sperms are very small in size, each has a head, a middle piece and a tail. It is unicelled with all the usual cell components. Figure 9.14 shows the male reproductive organs in humans.



► Fig. 9.14 Male reproductive organs in humans

4. Answer:

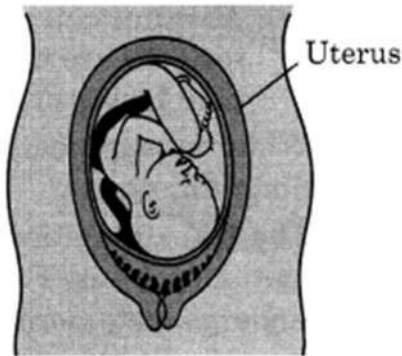
The female reproductive organs mainly consist of a pair of ovaries, oviducts or fallopian tubes, uterus and vagina. The female gametes called ova or eggs are produced by ovary. In human beings, a single matured egg is released into the oviduct by one of the ovaries every month. Uterus is the part inside which the embryo grows and develops finally into a baby. An egg or ovum is a single cell. Vagina is the part which receives the penis during copulation. The following diagram shows these organs clearly.



► Fig. 9.15 Female reproductive organs in humans

5. Answer:

An embryo is developed in the process of fertilisation. Fertilisation results in the formation of zygote which begins to develop into an embryo [Refer Fig. 9.7(a)].



► Fig. 9.16 Foetus in the uterus of female

The zygote divides repeatedly to give rise to a ball of cell (Refer Fig. 9.7(b)) which further begin to form groups that develop into different tissues and organs of the body. This developing structure is called an embryo. The embryo gets embedded in the wall of the uterus for further development [Refer Fig. 9.7(c)]. The embryo continues to develop in the uterus. It gradually develops different body parts. This developing stage of embryo is called foetus (Fig. 9.16).