

Subject – Science

Class- 8

Topic – chapter-9 Reproduction in animals

EXERCISES

Use Cordova Smart Class Software on the smart board in class to do these exercises.

Tick (✓) the correct options:

- The function of testes is to produce _____.
 (a) ovum (b) egg (c) semen (d) sperms
- Fertilisation of egg in case of women takes place in _____.
 (a) uterus (b) vagina (c) ovary (d) fallopian tube
- The number of nuclei present in a zygote is _____.
 (a) one (b) two (c) four (d) none
- Binary fission takes place in _____.
 (a) Hydra (b) Paramecium (c) yeast (d) Planaria
- The process that ensures continuity of life on the earth is _____.
 (a) respiration (b) excretion (c) reproduction (d) digestion
- The fluid produced by seminal vesicles mixes with the sperms to produce _____.
 (a) semen (b) testosterone (c) ovum (d) placenta
- A tadpole develops into an adult frog by the process of _____.
 (a) fertilisation (b) metamorphosis (c) budding (d) binary fission
- The male gametes are called _____.
 (a) ova (b) foetus (c) sperms (d) embryo

Fill in the blanks:

- The production of new animals from a single parent without the involvement of gametes is called _____.
- An adult female produces female gamete called _____.
- The fertilisation that occurs outside the female body is called _____.
- The act of giving birth to a baby is called _____.
- The embryo gets embedded in the walls of uterus. This is called _____.
- The process of production of gametes is called _____.
- Testosterone is the _____ sex hormone.

C. Very Short Answer Questions:

1. Name two animals each, that reproduce by (a) asexual mode (b) sexual mode.
2. Name one female sex hormone.
3. What do you call the fertilisation inside the body of a female?
4. Which type of reproduction takes place in *Amoeba*?
5. Expand IVF.
6. What is meant by menstruation?

D. Short Answer Type-I Questions:

1. What are viviparous animals? Name any two viviparous animals.
2. Give two differences between asexual and sexual reproduction.
3. What do you understand by the term 'ejaculation'?
4. How does scrotum help in the development of sperms?

E. Short Answer Type-II Questions:

1. What is the role of fallopian tubes and testes?
2. How does an *Amoeba* reproduce?
3. Explain the term 'gestation period'. What does the placenta provide to the growing foetus?
4. 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?

F. Long Answer Questions:

1. With the help of diagrams, explain reproduction in *Hydra*.
2. Discuss the development of embryo and foetus in human beings.

G. HOTS (Higher Order Thinking Skills) Questions:

1. How does a woman with blocked fallopian tube give birth to a baby?
2. How is the larva of a frog different from an adult frog?

EXERCISES

A. Tick (✓) the correct options:

1. (d) 2. (d) 3. (b) 4. (b) 5. (c) 6. (a)
7. (b) 8. (c)

B. Fill in the blanks:

1. asexual reproduction 2. ovum 3. external fertilisation
4. parturition 5. implantation 6. gametogenesis
7. male

C. Very Short Answer Questions:

1. (a) *Amoeba* and *Paramecium* (b) Frog and human being
2. Oestrogen 3. Internal fertilisation
4. Asexual reproduction
5. *in vitro* fertilisation
6. If the ovum is not fertilised by the sperm, it is expelled from the vagina along with some muscles and blood. This is called menstruation.

D. Short Answer Type-I Questions:

1. The animals that give birth to young ones are called viviparous animals, e.g., cats and cows.

2.

S. No.	Asexual reproduction	Sexual reproduction
(i)	It produces new animals without the involvement of gametes.	It produces new animals from the existing two parents by the fusion of their gametes.
(ii)	No zygote is formed.	Formation of zygote takes place.

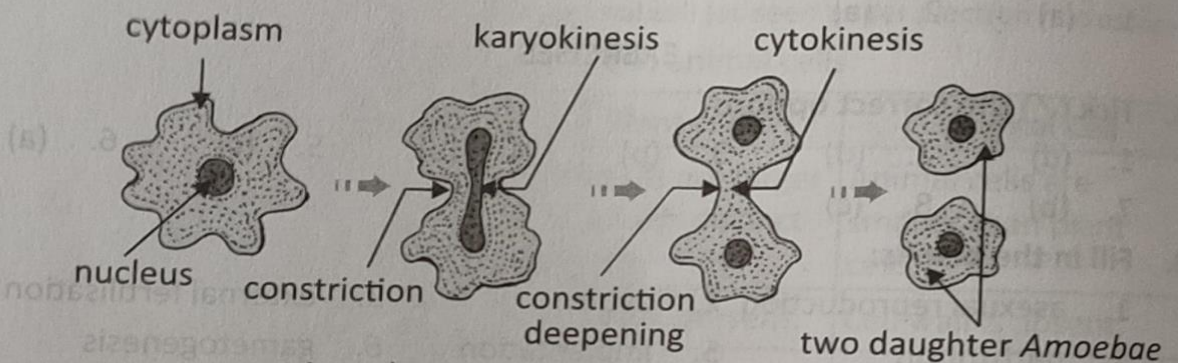
- The process of releasing sperms into vagina is called ejaculation.
- Scrotum acts as a thermoregulator and keeps the temperature of testes about $1-3^{\circ}\text{C}$ lower than the body temperature that is necessary for the production of sperms.

E. Short Answer Type-II Questions:

- The fertilisation of egg (or ovum) by the sperm takes place in the fallopian tubes.

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

- Amoeba* reproduce by binary fission. In binary fission, the parent organism splits to form two new organisms of the same kind. In binary fission of a fully grown *Amoeba*, the nucleus increases in size and divides into two parts (karyokinesis). After that, the cytoplasm divides into two parts (cytokinesis) around each nucleus and forms two daughter cells. In this way, a single parent *Amoeba* divides to form two daughter *Amoebae*.



Amoeba reproduces by binary fission.

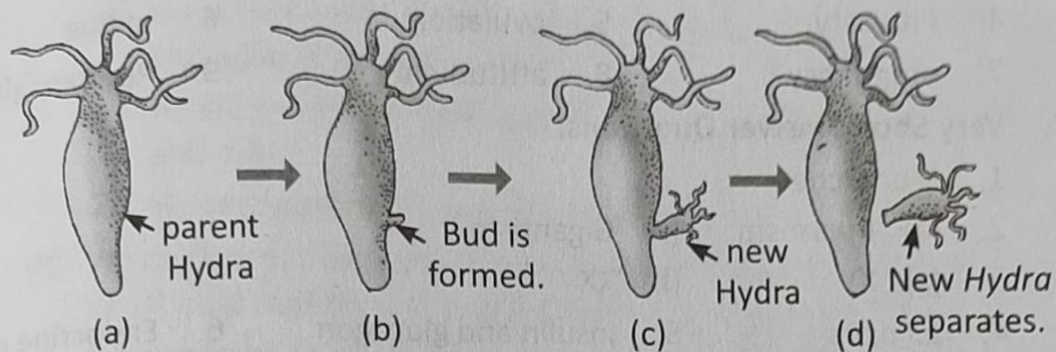
- The period of complete development of a foetus from fertilisation till the birth of a baby is called gestation period.

Placenta provides nutrients and oxygen to foetus and also removes wastes.

- Blockage of fallopian tube
 - 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.

F. Long Answer Questions:

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



2. In humans, the zygote divides rapidly and repeatedly to form a ball of hundreds of cells. The cells form groups and develop into different tissues and organs of the body. This developing structure is called embryo. The embryo continues to develop in the uterus. It gradually develops body parts such as hands, legs, head, eyes, ears, etc. The stage of the embryo in which all the body parts can be identified is called foetus. The foetus is attached to the uterus by a special structure called placenta. The placenta provides oxygen and nutrients to the foetus and also removes wastes.

G. HOTS (Higher Order Thinking Skills) Questions:

1. A woman with blocked fallopian tube can give birth to a baby by fertilisation of eggs outside the body. The method is called in vitro fertilisation. In such cases, the doctor collects freshly released eggs and sperms and keeps them together for a few hours for in vitro fertilisation to take place. The zygote formed as a result of fertilisation of egg is placed in the mother's uterus for further development.
2. The larva of frog is not similar to the adult frog because larval stage of frog that is the tadpole is restricted to water as the egg gets fertilised in water and hatches into a tadpole. The tadpole, thus, possesses those characteristics that enable it to survive in water. Also, the tadpole has a tail that is absent in case of frog.