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# REPRODUCTION IN ANIMALS

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Chapter: 9



CLASS: - 8TH  
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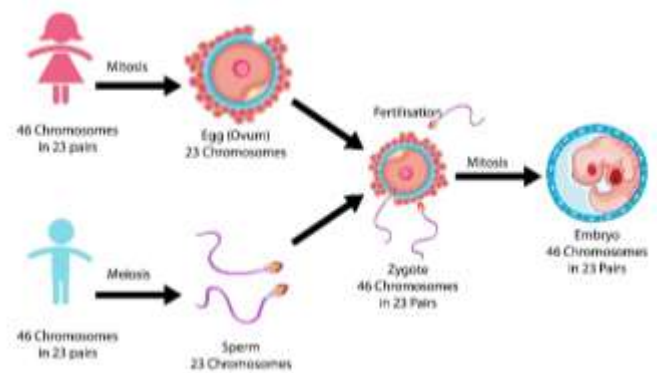
## Chapter: 9

# REPRODUCTION IN ANIMALS

### Exercises

**Q1:** Explain the importance of reproduction in organisms.

**Ans:** - Reproduction is really important for living things. It helps them make new individuals of their own kind. This is how species continue to exist over time. When organisms reproduce, they pass on their special traits to their offspring. This helps them adapt to their surroundings and survive. Reproduction also makes sure there is enough variety in the genes, which is important for the evolution and response to different conditions.



**Q2:** Describe the process of fertilisation in human beings.

**Ans:** In human reproduction, males produce sperm cells, while females produce eggs called ova. During sexual intercourse, sperm is deposited inside the female body. A sperm cell fuses with an egg cell, forming a zygote. The zygote then develops into an embryo. The embryo attaches to the wall of the female uterus and continues to grow and divide, eventually becoming a foetus.

**Q3:** Choose the most appropriate answer.

(a) Internal fertilisation occurs

(i) in female body.

(ii) outside female body.

(iii) in male body.

(iv) outside male body.

**Ans:** (i) in female body.

(b) A tadpole develops into an adult frog by the process of

(i) fertilisation

(ii) metamorphosis

(iii) embedding

(iv) budding

**Ans:** (ii) metamorphosis

(c) The number of nuclei present in a zygote is

- (i) None
- (ii) One
- (iii) Two
- (iv) Four

Ans: - (ii) One

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

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

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

Ans: Two differences between a zygote and a foetus.

<i>Zygote</i>	<i>Foetus</i>
<i>a) The zygote is a single-cell structure.</i>	The foetus is a multicellular structure consisting of various tissues and organs.
<i>b) The zygote is the earliest stage of development.</i>	The foetus is a later stage of development, typically occurring after the embryonic stage.

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

**Ans:** Asexual reproduction is a type of reproduction in which offspring are produced without the involvement of gametes or the fusion of genetic material from two parents.

- a) **Budding:** Budding is a form of asexual reproduction in which a new organism develops as an outgrowth or bud on the body of the parent organism. The bud gradually grows and develops into a genetically identical individual. Eventually, it detaches from the parent organism and becomes independent. Hydra, a freshwater animal, is an example of an organism that reproduces through budding.



- b) **Fragmentation:** Fragmentation is a process where a parent organism breaks into fragments, and each fragment has the ability to regenerate into a complete individual. These fragments may separate naturally or due to external forces. Each fragment then develops into a genetically identical organism. Some species of starfish and planarians are capable of reproducing through fragmentation.



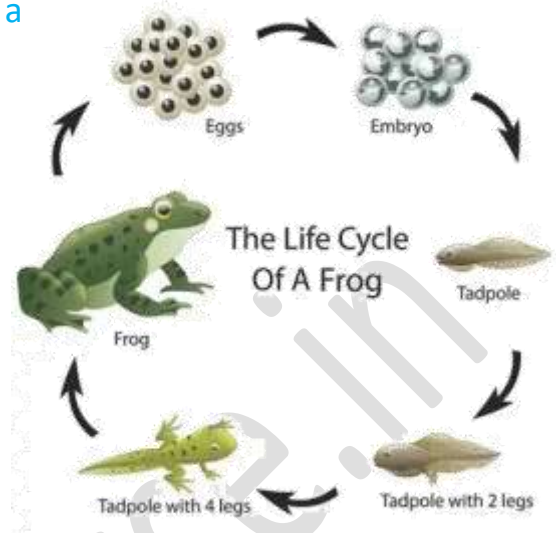
**Q7: In which female reproductive organ does the embryo get embedded?**

**Ans:** The embryo gets embedded or implanted in the uterus, which is the main female reproductive organ where pregnancy occurs. After fertilization, the developing embryo travels through the fallopian tube and reaches the uterus. The uterus provides a suitable environment for the embryo to implant and receive nourishment.

**Q8: What is metamorphosis? Give examples.**

**Ans:** Metamorphosis is a process of changing from a young form to an adult form, which happens in different stages. This transformation is commonly seen in insects, amphibians like frogs, as well as some other animals like molluscs, crustaceans etc.

A good example of metamorphosis is when a tadpole, which is a young frog that lives in the water and has a tail, goes through a remarkable change. It gradually develops legs, loses its tail, and transforms into an adult frog that can live both on land and in water.



**Q9: Differentiate between internal fertilisation and external fertilisation.**

**Ans: - Differentiate between internal fertilisation and external fertilisation are: -**

<b><i>Internal fertilisation</i></b>	<b>External fertilisation</b>
<b>a)</b> <i>The fusion of sperm and egg occurs inside the body of the female organism.</i>	The fusion of sperm and egg occurs outside the body of the female organism, typically in the external environment
<b>b)</b> <i>Found in many mammals, birds, reptiles, and some fish and insects.</i>	Commonly observed in fish, amphibians, and some invertebrates
<b>c)</b> <i>The male transfers sperm directly into the female reproductive system.</i>	Both males and females release their gametes (sperm and eggs) into the environment.
<b>d)</b> <i>Typically, internal fertilization provides greater protection and higher chances of offspring survival.</i>	Offspring have lower survival rates due to exposure to external factors like predation and environmental conditions.

### Key words

1. **ASEXUAL REPRODUCTION:** A type of reproduction where offspring are produced without the involvement of gametes or the fusion of genetic material from two parents.
2. **BINARY FISSION:** A form of asexual reproduction in which a parent organism divides into two equal-sized daughter cells, each becoming a separate individual.
3. **BUDDING:** A form of asexual reproduction where a new organism develops as an outgrowth or bud on the body of the parent organism before eventually detaching and becoming independent.
4. **EGGS:** Female reproductive cells that are produced by animals, including birds, reptiles, and some mammals. They serve as the female gametes and are typically involved in sexual reproduction.
5. **EMBRYO:** The early stage of development after fertilization, characterized by rapid cell division. It eventually develops into a more complex organism.

6. **EXTERNAL FERTILIZATION:** The fusion of sperm and egg outside the body of the female organism, typically occurring in the external environment (such as water or land).
7. **FERTILIZATION:** The process where a sperm cell fuses with an egg cell, resulting in the combination of genetic material and the formation of a zygote.
8. **FOETUS:** The stage of the embryo in which all the body parts can be identified is called a foetus
9. **INTERNAL FERTILIZATION:** The fusion of sperm and egg inside the body of the female organism, often facilitated by direct transfer of sperm from the male to the female reproductive tract.
10. **METAMORPHOSIS:** A biological process in which an organism undergoes a distinct and often dramatic change in its body structure as it progresses through different life stages.
11. **OVIPAROUS ANIMALS:** Animals that lay eggs, and the young hatch from these eggs outside the parent's body.
12. **SEXUAL REPRODUCTION:** A type of reproduction where offspring are produced through the fusion of gametes from two parents, resulting in genetic diversity.
13. **SPERMS:** Male reproductive cells that are produced by animals and serve as the male gametes. They are typically involved in sexual reproduction.
14. **VIVIPAROUS ANIMALS:** Animals that give birth to live young, where the embryos develop inside the parent's body and receive nourishment from the parent.
15. **ZYGOTE:** The single cell that is formed when a sperm cell fertilizes an egg cell, containing the combined genetic material from both parents.

