

## Chapter - 09

## Reproduction in Animals

Exercise :-

- Ques (1) Explain the importance of reproduction in organisms. Reproduction is a biological process through which living organisms produce offspring similar to themselves. Living organisms reproduce to maintain their numbers and to ensure the continuation of similar kinds of individuals, generation after generation.
- Ques (2) Describe the process of fertilisation in human beings. Fertilisation involves the fusion of male and female gametes. The male and female gametes are released from their respective reproductive organs. Sperms or male gametes are released from the male reproductive organs. These sperms then enter into the female body through the vagina. Then, they travel through the fallopian tubes where they meet the eggs. Hence, the process of fertilisation takes place in the uterus.

Ques (3) Choose the most appropriate answers.

- (a) Internal fertilisation occurs
- (a) In female body.
- (b) Outside female body.
- (c) In male body.
- (d) Outside male body.

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

- (i) Fertilisation   
 (ii) Metamorphosis   
 (iii) embedding   
 (iv) budding

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

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

Ques (4) 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 fertilisation takes place in frog. - True  
 (d) A new human individual develops from a cell called gametes. - False  
 (e) Egg laid after fertilisation is made up of a single cell. - True  
 (f) Amoeba reproduces by budding. - False  
 (g) fertilisation is necessary even in asexual reproduction. - False  
 (h) Binary fusion is a method of asexual reproduction. - False  
 (i) A zygote is formed as a result of fertilisation. - True  
 (j) An embryo is made up of a single cell. - False



Ques (5) Give two differences between a zygote and a foetus.

Zygote	foetus
(i) It is a fertilised egg formed after the fusion of sperm with the egg.	(i) It is a stage of embryo that shows all the main recognizable body parts of a mature organism.
(ii) Zygote is unicellular.	(ii) foetus is multicellular.

Ques (7) In which female reproductive organ does the embryo get embedded?

The embryo gets wall of the uterus. The attached to the

The embryo gets embedded in the wall of the uterus. The embryo while attached to the uterus gradually develops various body parts such as hands, legs, head, eyes, etc. The embryo is then called a foetus.

Ques (8) What is metamorphosis? Give examples.

Metamorphosis is a biological process of transforming a larva into an adult. This involves drastic changes in the animal's structure. Frogs and insects are examples of organisms showing metamorphosis.

The life cycle of a frog has three distinct stages.

Egg → Tadpole → Adult.



a small number of eggs are produced.

a large number of eggs are produced.

(3) Humans, cows, Hens, are Organisms showing internal fertilisation.

(3) fish, frog, starfish are Organisms showing external fertilisation.

Ques- (6) Define asexual reproduction. Describe two methods of asexual reproduction in animals.

Asexual reproduction is a mode of reproduction that does not involve the fusion of the male and female gametes. It requires only one parent, and the offsprings produced are exact copies of their parents.

Two methods of asexual reproduction in animals are :-

(i) Binary fission

Amoeba is a single-celled organism. It begins the process of reproduction by the division of its nucleus into two nuclei. This is followed by division of its body into each part receiving a nucleus. Finally, two amoebae are produced from one parent amoeba. This type of asexual reproduction is called Binary fission.

The tadpole that emerges from the egg contains gills, a tail and a small circular mouth. They can swim freely in the water. The tadpole grows and involves abrupt changes in its structure and develops into a mature frog. Metamorphosis begins within the development of limbs, lung development, and finally the absorption of the body.

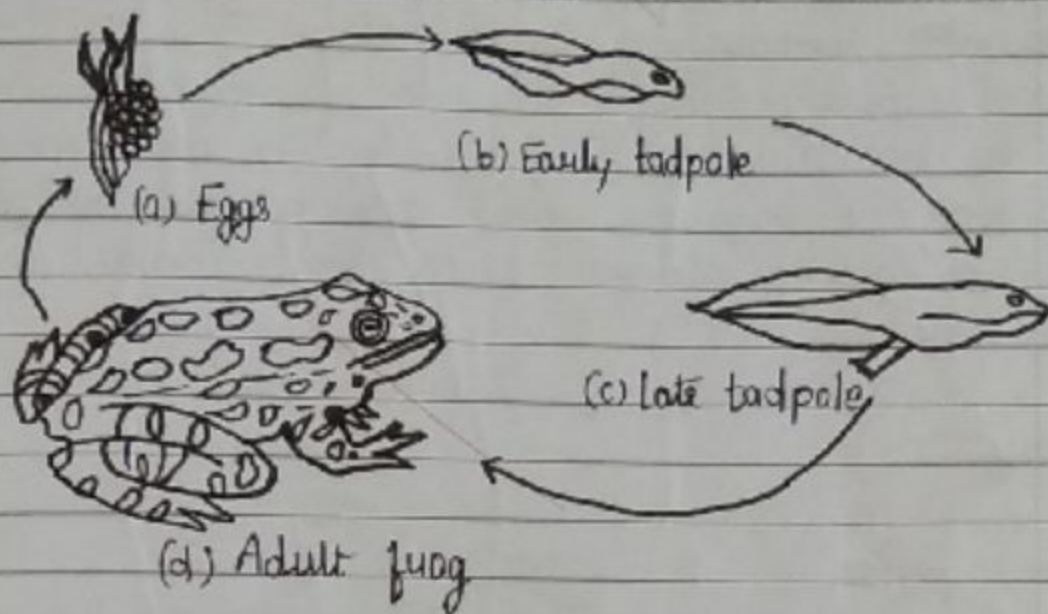


Fig 9.10: Life cycle of frog

Ques (9) Differentiate between internal fertilisation and external fertilisation.

Internal fertilisation

External fertilisation

(1) It involves the fusion of male and female gametes inside the female body.

(1) It involves the fusion of male and female gametes outside of the female body.

(2) Chances of survival of the offspring are more therefore a small number

(2) Chances of survival of the offspring are less, therefore



This method of reproduction is common in Hydra.

In Hydra the cells divide the rapidly in a specific site and develop as an out growth, called the bud. These buds, while <sup>being</sup> attached to the parent plant, develop into smaller individuals. When these individuals become mature. After that they themselves detached from the parents body and become Independent Individuals.

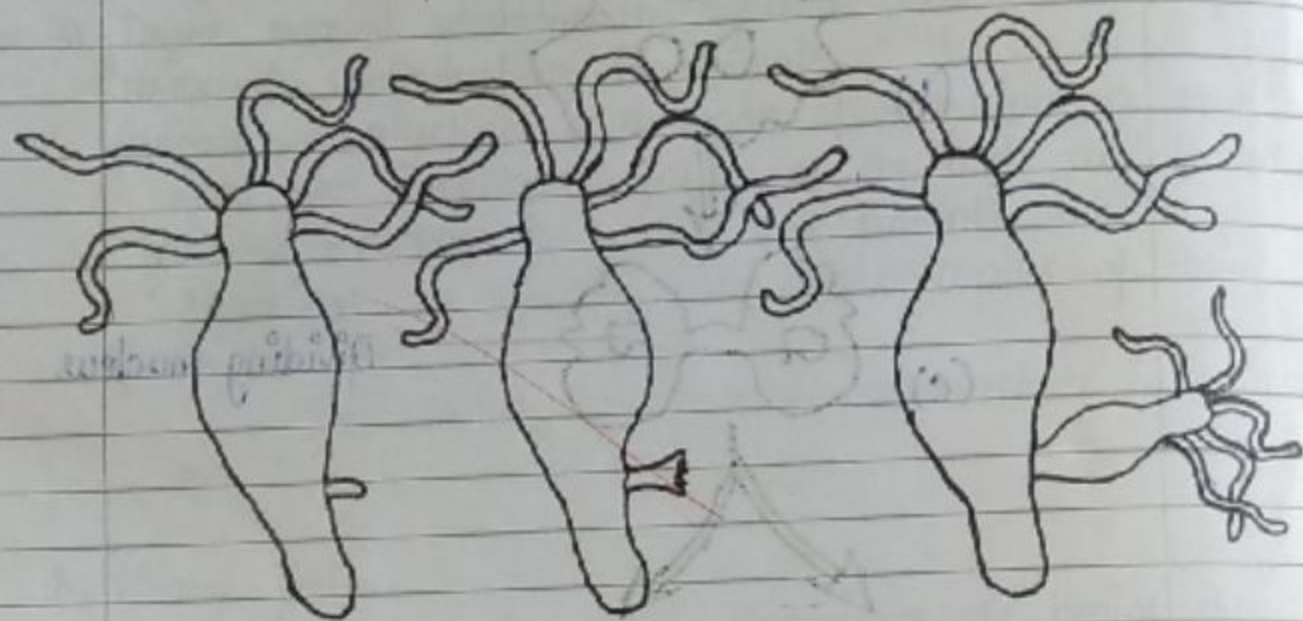


Fig. 9.11: Budding in Hydra

Que - (10) One word Answer

Answer

- (i) The process of the fusion of the gametes. - Fertilization
- (ii) The type of fertilisation in hen. - Internal
- (iii) The term used for bulges observed on the sides of the body of hydra - Buds
- (iv) Eggs are produced here. - Ovary

Down

- (2) Sperms are produced in these male reproductive organs. -  
Testis
- (3) Another term for the fertilised egg. - zygote
- (4) These animals lay eggs. - Oviparous
- (5) A type of fission in amoeba. - Binary.

Term = 1<sup>st</sup>  
Syllabus  
Completed