Reproduction in Animals

Class 8 Science

Question 1.
Explain the importance of reproduction in organisms.
Answer:
Reproduction is a vital phenomenon on this planet earth which is essential for existence and continuity of life and species on it, generation after generation.

Question 2.
Describe the process of fertilisation in human beings.
Answer:
In the process of fertilisation, sperms come in contact with an ova (egg). One of the sperms may fuse with the egg. The nuclei of the sperm and the egg fuse to form a single nucleus resulting in the formation of a fertilised egg called zygote. In human being, the fertilisation takes place inside the female body, known as internal fertilisation.

Question 3.
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.
(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
Answer:

(a) (i)
(b) (ii)
(c) (ii)

Question 4.
Indicate whether the following statements are True (T) or False (F).

1. Oviparous animals give birth to young ones.
2. Each sperm is a single cell.
3. External fertilisation takes place in frog.
4. A new human individual develops from a cell called gamete.

1. Egg laid after fertilisation is made up of a single cell.
2. Amoeba reproduces by budding.
3. Fertilisation is necessary even in asexual reproduction.
4. Binary fission is a method of asexual reproduction.
5. A zygote is formed as a result of fertilisation.
6. An embryo is made up of a single cell.

Answer:

1. False
2. True
3. True
4. False
5. True
6. False
7. False
8. True
9. True
10. False

Question 5.
Give the differences between a zygote and a foetus.
Answer:

| Zygote	Foetus
(i) It is a single celled, i.e., it contains only one cell.	(i) It is multicelled, i.e., it contains many cells.

Question 6.
Define asexual reproduction. Describe two methods of asexual reproduction in animals.
Answer:
The mode of reproduction in which only a single parent is involved is called asexual reproduction. In this type of reproduction, sex cells (gametes) are not produced and no fusion of gametes takes place for the reproduction of zygote or offsprings. Asexual reproduction takes place in Amoeba, Hydra, yeast, starfish, sponges, etc.
There are mainly two methods of asexual reproduction:

(i) Binary fission: In binary fission, a single parent cell is divided into two equal individual cells as in Amoeba. It divides into two by division of their bodies, each of them gets one nucleus and develops into separate individual. The figure given below shows how binary fission occurs in Amoeba.
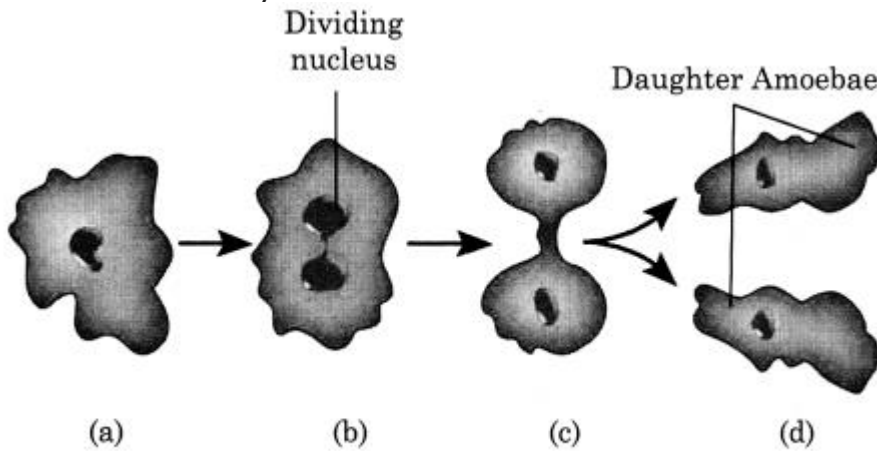
Binary fission in Amoeba

(ii) Budding: In budding, the organism develops a bulge called bud which further develops into an adult organism and separates itself from the parent body to lead an independent life. This type of reproduction is shown in Hydra. The following figure shows budding in Hydra.
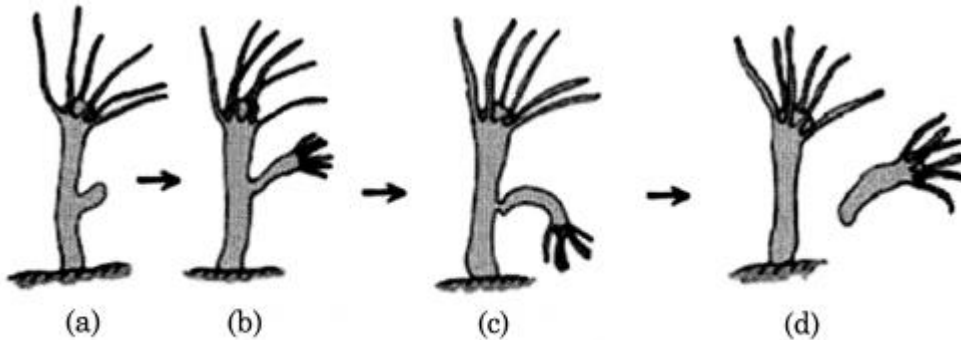
Budding in Hydra

Question 7.
In which female reproductive organ does the embryo get embedded?
Answer:
Uterus

Question 8.
What is metamorphosis? Give examples.
Answer:
The transformation of larva into an adult involving sudden and abrupt changes in the body of an ani¬mal during the life cycle of an invertebrate or amphibian is called metamorphosis. Example, frog and butterfly.

Question 9.
Differentiate between internal fertilisation and external fertilisation.
Answer:

Internal Fertilisation	External Fertilisation
(i) The fusion of male gamete or sperm and female gamete or ova occurs inside the body of a female partner, such as human beings, birds, and mammal.	(i) The fusion of male gamete and female gamete takes place outside the body of a female partner, such as in frog, fish and starfish.
(ii) The female partner lays either fertilised eggs or a fully grown young one.	(ii) The female partner discharges unfertilised eggs.