

Board – ICSE

Class – 8

Topic – TRANSPORT IN PLANTS

Q.1. Multiple choice questions: Tick the correct choice.

- a. The common method of reproduction in bacteria is
(a) budding (b) fragmentation
(c) binary fission (d) all the above

Ans. (c) binary fission

- b. Budding is commonly seen in
(a) yeast (b) grasses
(c) Amoeba (d) Spirogyra

Ans. (a) yeast

- c. Testes are present in a sac called?
(a) scrotum (b) oviduct
(c) epididymis (d) none

Ans. (a) scrotum

- d. The reproductive organ of a woman is
(a) testes (b) ovaries
(c) ovum (d) uterus

Ans. (b) ovaries

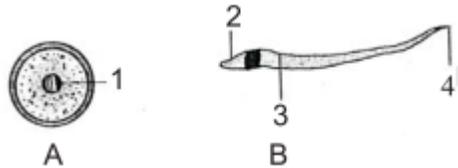
- e. The cord which connects the mother and the child in uterus is
(a) placenta (b) yolk
(c) umbilical cord (d) arteries

Ans. (c) umbilical cord**Q.2. Which of the following statements are true (T) and which ones are false (F)?****Mark T or F:**

1. Asexual reproduction is more common than the sexual reproduction.
2. Producing life is called respiration.
3. Dogs and cats reproduce from two parents.
4. Bacteria, yeast and amoeba reproduce by sexual reproduction
5. Amoeba is an immortal animal.
6. Hydra reproduces asexually by binary fission.
7. Testes produce sperms called semen.
8. The human reproductive organs in male are known as ovaries.

Ans. 1. T 2. F 3. T 4. F 5. T 6. F 7. T 8. F

Q.3 The figure below shows two reproductive cells:



- (i) Identify A and B.
- (ii) Label the parts 1, 2, 3, 4.
- (iii) When is 'B' produced?
- (iv) What happens when A and B fuse:
Product: _____ Process: _____

Ans. (i) (A) Ovum (B) Sperm
(ii) (1) Nucleus (2) Head (3) Neck (4) Tail
(iii) Sperms are produced at the age of puberty. It is male reproductive cell.
(iv) The process of the fusion of sperm and ovum is called fertilization. After fertilisation the young embryo passes down into the uterus.

Q.4 Answer the following Questions.

1. Why is reproduction necessary for living organism?

Ans. Reproduction is necessary for living organism because it maintains the genetic continuity among a species and it allows to increase in the total numbers of a species. Reproduction means to produce young ones of their own kind. It is one of the most important properties of living organism. For example, a dog produces puppy which grows into adult dog. In plants, seeds also grow into young seedlings. The seedlings in due course of time develop into mature plants as in neem tree.

2. Which part of the human body produces (i) Sperms (ii) Ova?

Ans. (i) A pair of testes in scrotal sac produce sperms.
(ii) A pair of ovaries produce ova.

3. Name the organ involved in the following:

- (i) Fertilisation of ovum by the sperm.
- (ii) Passing of sperms from a man to a woman.

Ans. (i) Fertilisation takes place inside the female's body in the oviduct.
(ii) Penis is used for passing sperms inside the body of the female.

4. Describe the male and female reproductive system in human beings.

Ans. Male reproductive system. A male reproductive system has following organs:

- (a) Testis: A pair of testes are present in scrotal sac that produce male gametes or sperms.
- (b) Epididymis: A long coiled tube in which sperms are stored.
- (c) Vas deferens: A pair of ducts carrying sperms from testes to outside through urethra.
- (d) Penis: Male reproductive organ, used for injecting sperms inside the body of female.

Female reproductive system. A female reproductive system has following organs:

- (a) Ovary. A pair of ovaries are present that produce female gametes or ova.
- (b) Fallopian tube. A tube that carries egg cells from the ovary to the womb.
- (c) Uterus. Embryo develops in the uterus.
- (d) Vagina. It is a tube which leads from uterus to the outside. Sperms are deposited in the vagina during copulation.

5. How is fertilization brought about in a flower?

Ans. In plants, fertilization is followed by pollination. By different agents pollen grains are transferred to the stigma. These pollen grains absorb nutrients secreted by the stigma and the cytoplasm in the grain grows out as a tube. This tube grows to ovary through style and enters into the ovule. The tip of the pollen tube breaks open in the ovule, and the male nucleus enters the ovule and fuses with the female nucleus. This process of the union of male and female nucleus is called fertilisation.

6. Distinguish between:

- (a) Binary fission & budding

Ans.

Binary fission Budding

Binary fission	Budding
(1) In binary fission, organism divides into two equal-sized cells after developing a transverse wall.	(1) In budding, a small out growth (bud) appears on the parent cell. This bud develops into a new organism.
(2) After binary fission equal- sized cells are formed.	(2) In budding, an organism with small size is formed.
(3) It occurs mostly in bacterial cell	(3) It occurs in yeast cell.

7. What is binary fission?

Ans. In favourable conditions, some unicellular organisms like bacteria and amoeba reproduce by this method. In this method, firstly nucleus divides into two, then cytoplasm with a small

divided nucleus in each part. These two cells separated by transverse binary fission. Thus, two daughter cells are formed from the original one. These two daughter cells act as new individuals.

8. How does hydra reproduce?

Ans. Hydra reproduce mainly asexually by budding.

9. What are the differences between a sperm and an ovum?

Ans. Difference between a sperm and an ovum.

Sperm	Ovum
(1) It is male reproductive cell.	(1) It is female reproductive cell.
(2) It is produced by testes.	(2) It is produced by ovaries.
(3) Testes produce a large number of sperms at one time.	(3) Ovaries produce one ovum at one time.
(4) A sperm is made of head, neck and tail.	(4) An ovum is made of nucleus and cytoplasm.

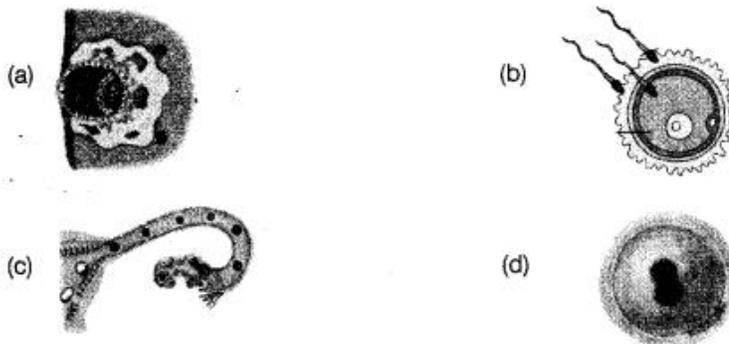
10. Where does human embryo develop?

Ans. After fertilization, human embryo passes down into the uterus, where it grows into a baby.

11. What is the function of placenta?

Ans. Placenta is the connection between embryo and uterus. It can pass oxygen and nutrients between the blood of embryo and its mother.

12. Observe the following figures.



(i) Identify the stages (a) to (d) in figure during development of human baby.

(ii) Arrange the stages in correct sequence of development.

(iii) Explain the development that takes place in any one stage.

Ans.

1. The figures showing stages during development of embryo are identified as
 - (a) Embedding of the embryo in the uterus (implantation).
 - (b) Fertilisation (fusion of egg and sperm).
 - (c) Stages in development of an embryo from the zygote in the oviduct, till it gets embedded in uterus.
 - (d) Zygote (showing fusion of nuclei)
2. The above stages in sequence are:
 - (b) Fertilisation → (d) Zygote formation → (c) Development of embryo → (a) Implantation of embryo in uterus.
3. Development of embryo The embryo after being implanted in uterus, continues to develop and divide and differentiate into body parts. The stage of embryo when body parts become distinct and identified is called foetus. After complete development of foetus, mother gives birth to baby.