

Science

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(Chapter – 8) (How Do Organisms Reproduce?)

(Class – X)

Exercises

Question 1:

Asexual reproduction takes place through budding in

- (a) *amoeba*.
- (b) yeast.
- (c) *plasmodium*.
- (d) *leishmania*.

Answer 1:

(b) Asexual reproduction takes place through budding in yeast.

Question 2:

Which of the following is not a part of the female reproductive system in human beings?

- (a) Ovary
- (b) Uterus
- (c) Vas deferens
- (d) Fallopian tube

Answer 2:

(c) Vas deferens is not a part of the female reproductive system in human beings.

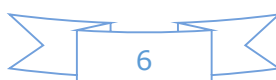
Question 3:

The anther contains

- (a) sepals.
- (b) ovules.
- (c) carpel.
- (d) pollen grains.

Answer 3:

(d) The anther contains pollen grains.



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Question 4:

What are the advantages of sexual reproduction over asexual reproduction?

Answer 4:

Advantages of sexual reproduction:

- In sexual reproduction, more variations are produced. Thus, it ensures survival of species in a population.
- The new formed individual has characteristics of both the parents.
- Variations are more viable in sexual mode than in asexual one. This is because in asexual reproduction, DNA has to function inside the inherited cellular apparatus.

Question 5:

What are the functions performed by the testis in human beings?

Answer 5:

The testes are the male reproductive organs that are located outside the abdominal cavity within a pouch called scrotum.

Functions of testes:

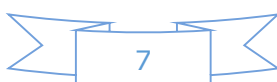
- Produce sperms
- Produce a hormone called testosterone, which brings about secondary sexual characters in boys.

Question 6:

Why does menstruation occur?

Answer 6:

Menstruation is a process in which blood and mucous flows out every month through the vagina. This process occurs every month because one egg is released from the ovary every month and at the same time, the uterus (womb) prepares itself to receive the fertilized egg. Thus, the inner lining of the uterus gets thickened and is supplied with blood to nourish the embryo. If the egg does not get fertilised, then the lining of the uterus breaks down slowly and gets released in the form of blood and mucous from the vagina.



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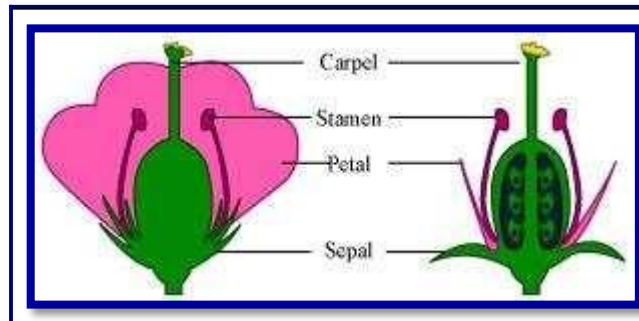
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Question 7:

Draw a labelled diagram of the longitudinal section of a flower.

Answer 7:



Question 8:

What are the different methods of contraception?

Answer 8:

The contraceptive methods can be broadly divided into the following types:

- **Natural method:** It involves avoiding the chances of meeting of sperms and ovum. In this method, the sexual act is avoided from day 10th to 17th of the menstrual cycle because during this period, ovulation is expected and therefore, the chances of fertilization are very high.
- **Barrier method:** In this method, the fertilization of ovum and sperm is prevented with the help of barriers. Barriers are available for both males and females. Condoms are barriers made of thin rubber that are used to cover penis in males and vagina in females.
- **Oral contraceptives:** In this method, tablets or drugs are taken orally. These contain small doses of hormones that prevent the release of eggs and thus fertilization cannot occur.
- **Implants and surgical methods:** Contraceptive devices such as the loop or Copper-T are placed in uterus to prevent pregnancy. Some surgical methods can also be used to block the gamete transfer. It includes the blocking of vas deferens to prevent the transfer of sperms known as vasectomy. Similarly, fallopian tubes of the female can be blocked so that the egg will not reach the uterus known as tubectomy.

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Question 9:

How are the modes for reproduction different in unicellular and multicellular organisms?

Answer 9:

In unicellular organisms, reproduction occurs by the division of the entire cell. The modes of reproduction in unicellular organisms can be fission, budding, etc. whereas in multicellular organisms, specialised reproductive organs are present. Therefore, they can reproduce by complex reproductive methods such as vegetative propagation, spore formation, etc. In more complex multicellular organisms such as human beings and plants, the mode of reproduction is sexual reproduction.

Question 10:

How does reproduction help in providing stability to populations of species?

Answer 10:

Living organisms reproduce for the continuation of a particular species. It helps in providing stability to the population of species by producing a new individual that resembles the parents. This is the reason why cats give birth to only cats or dogs give birth to only dogs. Therefore, reproduction provides stability to populations of dogs or cats or any other species.

Question 11:

What could be the reasons for adopting contraceptive methods?

Answer 11:

Contraceptive methods are mainly adopted because of the following reasons:

- (i) To prevent unwanted pregnancies.
- (ii) To control population rise or birth rate.
- (iii) To prevent the transfer of sexually transmitted diseases.