EDUCATION SOURCE
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HOW DO ORGANISMS REPRODUCE?

Chapter: 8

EDUCATION SOURCE
CLASS: 10TH
science

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How do Organisms Reproduce?

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Q1:- What is the importance of DNA copying in reproduction?

Ans: DNA copying in reproduction is important for maintenance of body designs and features Moreover, DNA copying leads to variations variation is useful for the survival of species.

Q2:- Why is variation beneficial to the species but not necessarily for the individual?

Ans: Variations are beneficial for species because variation in species help them to survive the population is drastic situation but if variation occurs in single individual, then it will be difficult for the individual to survive in normal conditions.

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Q1:- How does binary fission differ from multiple fission?

Ans: when two new daughter cells are formed as a result of fission. It is called binary fission, e.g., Amoeba. When many daughter cells are formed as a result of fission, this is called multiple fission, e.g., Malarial parasite.

Q2:- How will an organism be benefited if it reproduces through spores?

Ans: Due to the light weight of spores they can be easily dispersed through winds which give them more variations and thus better chances of survival.

Q3:- Can you think of reasons why more complex organisms cannot give rise to new individuals through regeneration?

Ans: the complex organism consists of large number of cells. and these cells form the tissue and the tissues form various organs which are placed at fixed positions in the body. All these organ systems are interconnected and work in full coordination. They can regenerate few of their lost body parts like skin, blood, muscles, etc. but can't give rise to new individuals.

Q4:- Why is vegetative propagation practised for growing some types of plants?

Ans: Vegetative propagation makes possible for the propagation of plants such as banana, orange, rose and jasmine that have lost the capacity to produce seeds. Moreover, all plants produced through vegetative propagation are genetically similar to the parent plant.

Q5:- Why is DNA copying an essential part of the process of reproduction?

Ans: DNA copying leads to DNA copies which are similar to the original. Thus, offspring have similar body design features inherited to them from their parents. DNA copying is an essential part of reproduction.

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Q1:- How is the process of pollination different from fertilisation?

Ans: Pollination is the transfer of pollen grains from the anther to the stigma of a flower whereas fertilization is the fusion of male gamete(sperm) with female gamete(egg).

Q2:- What is the role of the seminal vesicles and the prostate gland?

Ans: seminal vesicles and the prostate gland add their secretions so that the sperms are now in a fluid (semen) which makes their transport easier and this fluid also provides nutrition.

Q3:- What are the changes seen in girls at the time of puberty?

Ans: changes seen in girls at the time of puberty are:

1. Breast size begins to increase.
2. Girls begin to menstruate.
3. Growth of pubic hair.
4. Skin becomes oily.

Q4:- How does the embryo get nourishment inside the mother's body?

Ans: The embryo gets nutrition from the mother's blood with the help of a special tissue called placenta.

Q5:- If a woman is using a copper -T, will it help in protecting her from sexually transmitted diseases?

Ans: No, copper-T will not protect her from STDs. Only Barrier methods protect from sexually transmitted diseases.

Exercises

Q1:- Asexual reproduction takes place through budding in

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

Ans: (b) yeast.

Q2:- 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

Ans: (c) Vas deferens

Q3:- The anther contains

(a) sepals.
(b) ovules.
(c) pistil.
(d) pollen grains.

Ans: (d) pollen grains.

Q4:- What are the advantages of sexual reproduction over asexual reproduction?

Ans: The advantages of sexual reproduction:

(i) The offspring produced by sexual reproduction are different from the parents.

(ii) Variation enables organisms to survive in the changing environment.

Q5:- What are the functions performed by the testis in human beings?

Ans: Functions performed by the testis:

(i) It produces sperm.

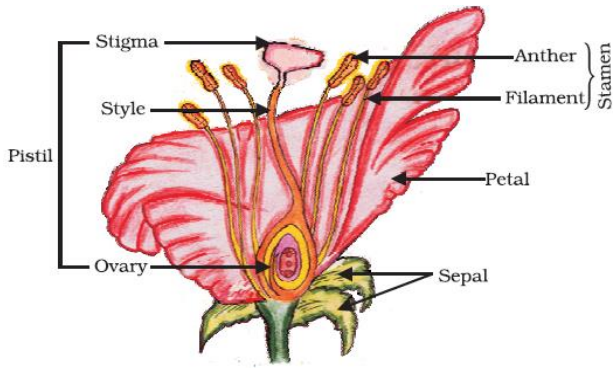
(ii) It also produces male sex hormone testosterone.

Q6:- Why does menstruation occur?

Ans: If the egg is not fertilized and uterus does not get zygote, the developed lining slowly breaks and menstruation occurs.

Q7:- Draw a labelled diagram of the longitudinal section of a flower.

Ans:



Q8:- What are the different methods of contraception?

Ans: There are three main methods of contraception:

(i) PHYSICAL BARRIER METHOD

⇨ To prevent union of sperm & egg. Use of condoms, Diaphragm & cervical caps.

(ii) SURGICAL METHOD

⇨ Also called sterilization in **Vasectomy**, the vas deferens of male is blocked to prevent sperm transfer. In **Tubectomy**, the fallopian tube of female is blocked to prevent egg to reach uterus. Copper-T or loop is placed in uterus to prevent pregnancy.

(iii) CHEMICAL METHOD

⇨ Oral contraceptive (OCs) - changes the hormonal balance to check the egg release in females. OCs cause side effect.

Q9:- How are the modes of reproduction different in unicellular and multicellular organisms?

Ans: Unicellular organisms reproduce asexually whereas multicellular organisms reproduce mainly by sexual reproduction.

Q10:- How does reproduction help in providing stability to populations of species?

Ans: The rate of birth and death in a given population determine its stability. The rate of birth should be approximately equal to the rate of death. So, by checking birth rate, which is increasing at an alarming rate, stability to population of species can be provided.

Q11:- What could be the reasons for adopting contraceptive methods?

Ans: Contraceptive methods are mainly adopted because of the following reasons:

1. To prevent unwanted pregnancies.
2. To control population, rise or birth rate.
3. To prevent the transfer of sexually transmitted diseases.