

Class 10 Science Chapter 8

(REPRODUCTION IN HUMAN BEINGS)

1. Why is DNA copying an essential part of the process of reproduction?

Solution:

DNA copying is an essential part of the process of reproduction because it carries the genetic information from the parents to offspring. A copy of DNA is produced through some chemical reactions resulting in two copies of DNA. Along with the additional cellular structure, DNA copying also takes place which is then followed by cell division into two cells.

2. What is the role of the seminal vesicles and the prostate gland?

Solution:

Lubrication of sperms and providing of a fluid medium for the easy transportation of sperms takes place with the help of secretions from the seminal vesicles and the prostate gland. These secretions also provide nutrients in the form of fructose, calcium and some enzymes.

3. What are the changes seen in girls at the time of puberty?

Solution:

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

- In genital area, hair growth appears.
- Hair growth in other areas like underarms, face, hands and legs.
- The size of uterus and ovary increases.
- The size of the breast increases followed by darkening of the nipple skin that is present at the tip of the breast.
- Beginning of menstrual cycle.
- Appearance of pimples, as the oil secretion is more from the skin.

4. How does the embryo get nourishment inside the mother's body?

Solution:

The lining of the uterus thickens after fertilization. The blood flow is good so as to nourish the growing embryo. Placenta is a special tissue which is embedded in the uterine wall and helps the embryo get the nourishment from the mother's tissue. Placenta has villi on the embryo side and blood space on the mother's side. This

spacing provides a large area between the mother and the embryo and also for waste removal.

5. If a woman is using a Copper-T, will it help in protecting her from sexually transmitted diseases?

Solution:

No, because usage of copper-T cannot stop the contact of body fluids. Hence, it cannot protect her from getting sexually transmitted diseases.

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

Solution:

Following are the functions performed by the testis in human beings:

- Apart from the production of sperms, it also produces the male hormone known as androgens.
- They also produce hormone called testosterone, which is responsible for secondary sexual characters in boys.

7. Why does menstruation occurs?

Solution:

Menstruation is the normal bleeding of the vaginal line which starts between puberty and lasts till menopause. During this period, the body prepares itself for pregnancy.

Every month an egg is released from one of the ovaries at the same time where the uterus prepares itself for fertilized egg. The inner lining of the uterus gets thickened and is supplied with sufficient amount of blood for the embryo. Since there is no interaction between the egg and the sperms, the fertilization of egg doesn't takes place. So when the egg doesn't get fertilized, the uterus lining breaks down slowly resulting in menstruation.

8. 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

Solution:

(c) Vas deferens