

8

HOW DO ORGANISM REPRODUCE

Ch-3

EXERCISES

INTEXT QUESTIONS

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1. What is the importance of DNA copying in reproduction?

- The characteristics of the parent ^{organism} cell ~~is copied~~ ~~by making~~ are transmitted to its offspring.
- Some variations are produced in the offspring during reproduction which form the basis for evolution.
- It maintains the characteristics of species.

∴ Why is variation beneficial to the species but not necessarily for the individual?

Variation is useful for the survival of a species even in adverse environmental conditions. This happens as follows: There

may be some drastic changes like excessive heat or cold or shortage of water, etc. in the habitat of a species of organisms. Now if all the organisms of a population living in that habitat are exactly identical, then there is danger that all of them may die and no one would survive under those conditions. This will eliminate the species from that habitat. However, if some variations are present in some individual organisms to tolerate excessive heat or cold or survive on ~~meagre~~ meagre water supply, then there is a chance for them to survive flourish even in adverse environment.

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1. How does binary fission differ from multiple fission?

- In binary fission, the parent organism splits to form two new organisms. ~~of the~~ other hand, Ex - Amoeba
- In multiple fission the parent organisms split to form many new organisms simultaneously.

2. How will an organism be benefitted if it reproduces through spores?
- The reproduction by spores takes place in plants. Spores are covered by hard protective coat which enables them to survive under favourable conditions like lack of food, lack of water and extreme conditions. But when the conditions become favourable, then the spores can grow to produce new plants. Thus the reproduction by spores benefits the plants because by surviving under under adverse condition,

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1. How is the process of pollination different from fertilisation?

Ans. Pollination is the transfer of pollen grains from the anther of stamen of a flower to the stigma of a carpel in the same flower or another flower of the same species. On the other hand, fertilisation occurs when the male gamete present in the pollen grain joins with the female gamete present in ovule to form a zygote.

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

Seminal vesicles and prostate gland occur in male reproductive system. The seminal vesicles and prostate gland add their secretions to the vas deferens which carries sperms from the testes. The secretions of seminal vesicles and prostate gland provide nutrition to the sperms and also make their further transport easier.

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

The various changes which occur in girls at puberty age are: Hair grow under armpits and pubic region. Mammary glands develop and enlarge. The hips broaden. Extra fat is deposited in various parts of the body like hips & thighs. Fallopian tubes, uterus and vagina enlarge. Ovaries start to release eggs. Menstruation starts.

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

The embryo gets nutrition from the mother's

blood with the help of special tissue called placenta. Placenta is disc-shaped tissue which is embedded in the uterus wall. It has villi on the embryo side of the tissue. On the mother's side are blood spaces which surround the villi. Placenta provides a large surface area for glucose and oxygen to pass from the mother to the embryo. The developing embryo also produces waste substances which can be removed by transferring them into the mother's blood through the placenta.

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

No, the use of copper-T for contraception will not protect a woman from sexually transmitted diseases.

EXERCISES

1. Asexual reproduction takes place through budding in yeast.

2. Which of the following is not a part of the female reproductive system in human beings?
Vas deferens.

3. The anther contains: pollen grains.

4. What are the advantages of sexual reproduction over asexual reproduction?

Sexual Reproduction	Asexual Reproduction
<ul style="list-style-type: none">• It combines DNA from two individuals due to which the offspring have a lot of variations.• Due to lot of variations sexual reproduction allows species to change to more advanced from one generation to the next the speed up evolution.	<ul style="list-style-type: none">• Only DNA of one individual is copied due to which the variations in the offspring are extremely small.• It does not allow a species to change much from one generation to the next and hence the evolution is very very slow.

5. Why does menstruation occur?

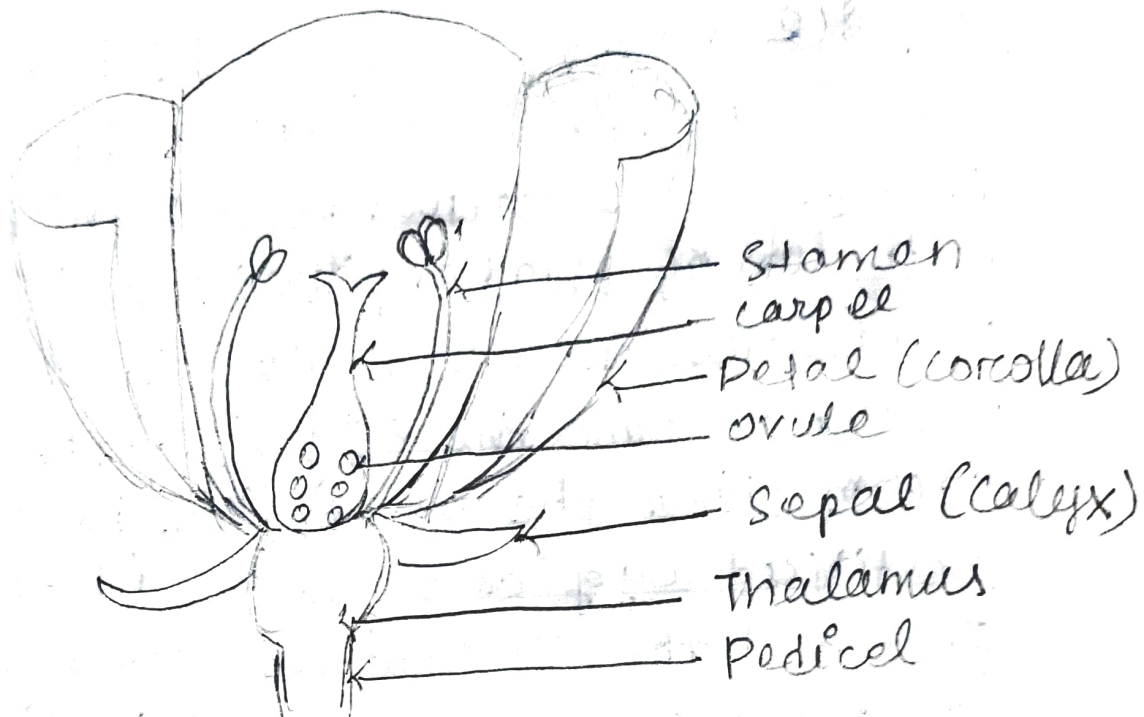
Since the ovary of a woman releases one egg every month, therefore, the uterus also

prepare itself every month to receive a fertilised egg. In this process, the inner lining of the uterus becomes thick and soft with lots of blood capillaries in it. This preparation in uterus ~~also~~ is necessary because in case the egg is fertilised by a sperm, then the uterus has to keep this fertilised egg and nourish it to develop it into a baby. If however, the egg released by the ovary is not fertilised, then the thick lining of the uterus is not needed. So, the uterus lining breaks down & comes out through the vagina in the form of blood & mucus. This is called menstruation.

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

The function of testes is to make male sex cells called sperm & also able to make the male sex hormone called testosterone. The testosterone hormone brings about changes seen in the appearance of boys at the time of puberty such as deeper voice, bearded, moustache, and more body hair than girls.

7.



Parts of flower.

8. What are the different methods of contraception?

(i) physical barrier - The physical devices such as condoms & diaphragm are used. It prevents the sperms from meeting the ovum by acting as a barrier between them. It has an added advantage of prevention of STD because the ejaculated semen is collected in the condom during mating.

(ii) chemicals - The females use oral pills. The oral pills contain a minor dose of progesterone that ~~inhibits~~ inhibits the ovulation.

(iii) IUCD - ~~The~~ These are tools that are implanted in uterus for long term use and prevent the entry of sperm to the oviduct.

(iv) Surgical methods - The sperm duct ~~and~~ in males is cut & tied properly to prevent the sperm from coming out. This is known as vasectomy. The oviduct in females is cut & tied properly to prevent the entry of sperm in the oviduct. This is known as tubectomy.

9. How are the modes of reproduction different in unicellular and multicellular organisms?

- Most of the unicellular organisms reproduce by the asexual process of fission. In this process, mere cell division leads to the creation of new individuals.

- In simple multicellular organisms, reproduction occurs by asexual methods such as budding, spore formation, fragmentation & regeneration, etc. But in complex organisms, reproduction takes place by

sexual methods involving gametes from two parents - a male and a female.

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

The process of reproduction introduces some variations in the individual organisms of a species. The variations introduced in some individual organisms may enable them to survive even in adverse environmental conditions such as excessive heat or cold or shortage of water, etc. In this way, the introduction of variations during reproduction provides stability to the population of various species by preventing some of their individuals from getting wiped out during adverse environmental conditions.