

## FlexiPrep

# CBSE Class 10 Science Important Questions Chapter 8 How Do Organisms Reproduce Part 3 (For CBSE, ICSE, IAS, NET, NRA 2022)

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### 3 Marks Questions

1. What changes occur in girls and boys in the age group of 10 - 14 years?

Ans. Changes in males (boys)

- 1) Widening of shoulder.
- 2) Deepening of voice
- 3) Appearance of beard and moustaches
- 4) Growth of sex organs

Changes in females (girls)

- 1) Widening of pelvis and hips.
- 2) High pitch voice.
- 3) Growth of auxiliary and pubic hair
- 4) Initiation of menstrual cycle.
- 5) Growth of mammary glands.

2. Describe sexually transmitted diseases (STDs) and mention the ways to prevent them.

Ans. Those infectious diseases which are spread by sexual contact called sexually transmitted diseases (STDs)

Methods for prevention of STDs

- a) The people should be educated about various STDs
- b) Extra – marital relations should be avoided
- c) Sex without proper precaution should be avoided
- d) High standard of moral education should be given to the people.

3. Name the surgical methods of birth control in human males and females respectively.

Ans. Surgical methods of birth control are –

- a) Castration – Removal of testes from the body of a male
- b) Ovariectomy – Removal of ovaries from the body of a female
- c) Vasectomy – small pieces of both the vas deferens are cut and removed.
- d) Tubectomy – Small pieces of both the fallopian tubes are removed.
- e) Laparoscopy – Fallopian tubes are blocked with the help of an instrument called laparoscope

4. What are the essential requisites for sexual reproduction?

Ans. Essential requisites for sexual reproduction are –

a) Transfer of germ cells – Specialized germ – cells have to fuse together, which can happen by either of the following modes –

(i) External release of germ cells – In flowering plant

(ii) Internal transfer of germ cells – In animal cells. Requirement of special organs – For example –

a) An erectile organ called penis

b) Organs which can carry the baby for long period

5. What is Micropropagation? Mention its advantages.

Ans. Micropropagation – It is a type of artificial vegetative propagation in which an isolated plant part is cultured under aseptic conditions with proper nutrient medium. Advantages of Micropropagation.

a) It is a quick method of multiplication of plants.

b) Virus free plants are produced by this method from virus infected plants

c) It can overcome seed dormancy

6. Mention the events taking place when the ovum is fertilized in fallopian tube till it is implanted in the uterus of human female.

Ans. After fertilization, the zygote starts dividing by repeated mitotic divisions called cleavage. In about 4 - 5 days after fertilization, zygote becomes a multicellular structure called blastocyst. The blastocyst gets attached to the lining of uterus is called implantation.

7. What are the post fertilizational changes in the flower?

Ans. Post – fertilization changes in flowers are –

a) The sepals, petals and stamens wither off

b) Style and stigma degenerate

- c) Ovary develops into fruit
- d) Ovules grows into seed
- e) Integuments of the ovule act as seed coats.
- f) Fertilized egg gets converted into embryo which bear plumule, radicle and cotyledons.
- g) Fertilized polar nuclei form endosperm which may or may not be consumed during seed development.

8. What are the major factors responsible for population explosion?

Ans. Reason for population explosion –

- (i) Better medical facilities – Better medical facilities have resulted in fall of death rate.
- (ii) Lack of education and awareness – This is a major factor since people become prey to ignorance
- (iii) Religions – For some people, family planning is against the norms set by their religion.
- (iv) Control over epidemics – Various medical technologies has made it possible to fight against epidemics.
- (v) Sanitary conditions – There is a lot of improvement in sanitary conditions which led to increase in population.

9. What are the advantages of vegetative propagation?

Ans. Advantages of vegetative propagation –

- a) It is a rapid, cheap and easy method of reproduction for the multiplication of plants
- b) Genetically identical plants (clones) are produced by this method
- c) Superior quality fruits or flowers can be produced by grafting.
- d) Disease free plants can be produced by this method
- e) Early flowering and fruit formation

10. Describe any 3 methods of asexual reproduction

Ans. Methods of asexual reproduction –

- a) Primary fission – It is a type reproduction in which one parent organism divides into two new organisms. Firstly nucleus divide and then division of cytoplasm takes place.
- b) Spore formation – A spore is a small microscopic structure with a thick wall. Spores are formed in a structure called sporangium. Nucleus inside sporangium divides repeatedly and produces many nuclei. Each nucleus is surrounded by cytoplasm and called spore.

c) Fragmentation – It is the breaking of an organism into two or more parts upon maturation, each of which grows to form a new individual.

11. What changes occur in ovaries during menstrual cycle?

Ans. Change occurs in ovaries during menstruation

a) 1 – 4 days – Corpus luteum degenerates. The ovary starts preparing for the maturation of a new follicle.

b) 5 – 13 days – Ovarian follicle develops to optimum. Estrogen secreted by ovaries causes thickening of uterine wall.

c) 14 day – Egg gets released from the ovary. It enters the fallopian tube, known as ovulation.

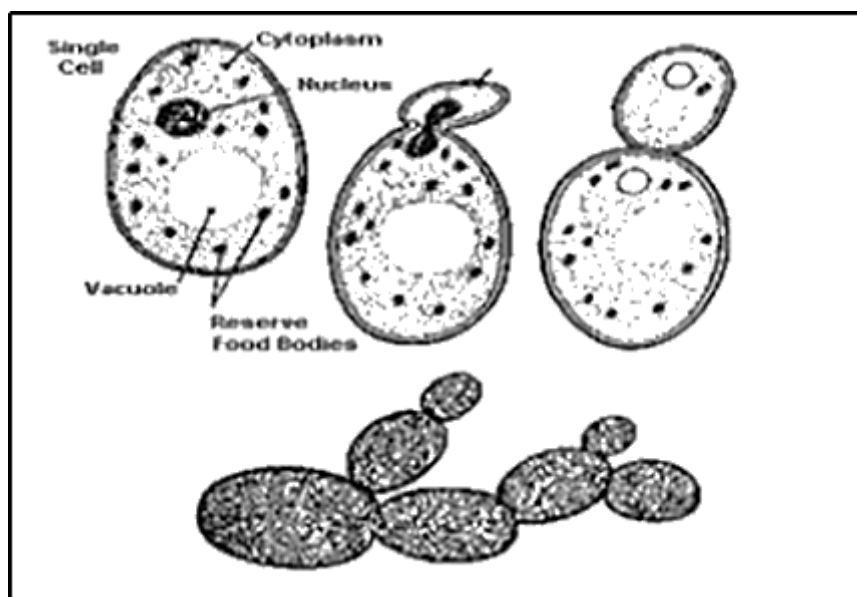
d) 15 to 28 days – After releasing the egg, the follicle part produces corpus luteum which produces progesterone. If pregnancy has not occurred, corpus luteum degenerates corpus luteum. This restarts menstrual cycle once again.

12. Describe budding in yeast, a fungus

Ans. a) It is a type of asexual reproduction in which an outgrowth (bud) is formed on the parent organism due to single cell division.

b) The bud gradually grows in size and gets detached from the parent body.

c) Detached bud develops into an adult organism, similar to the parent.



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13. What is the importance of reproduction?

Ans. Importance of reproduction –

a) Maintenance of the existence – Organisms are maintaining their existence on the earth since their origin, million year ago, only because of reproduction.

b) Preservation of species – Species (a group of similar organisms) are preserved because of reproduction. It is possible because reproducing organisms produce new individuals which are very similar to themselves.

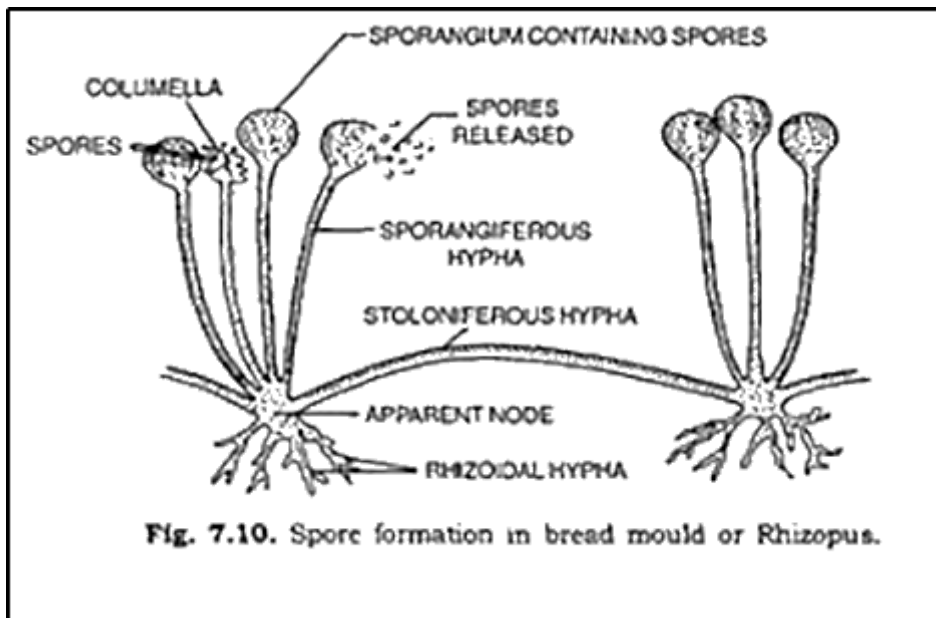
c) Role in evolution – some variations is produced in the new organisms during reproduction which play an important role in evolution.

14. How are spores produced in sporangium of Rhizopus?

Ans. a) A spore is a small microscopic structure with a thick wall.

b) Spores are generally formed in a structure called sporangium which resembles a blob on a stick.

- c) Sporangia are formed at the tip of erect fungal hypha.
- d) In each sporangium, a nucleus divides several times producing a large number of nuclei. Nuclei get surrounded by a little cytoplasm and develop into thick – walled cells or spores.
- e) The wall of sporangium breaks to release the spores in air.
- f) On germination in the presence of moist surface, each spore gives rise to a new organism.

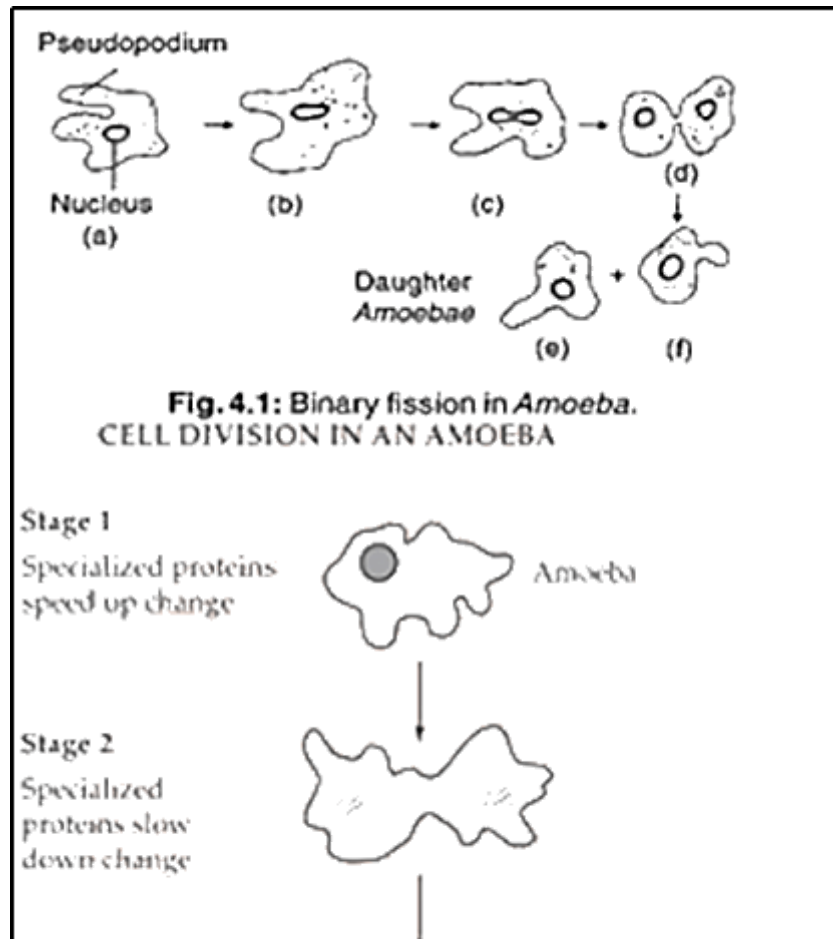


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15. Diagrammatically represent binary fission in amoeba

Ans.





**Fig. 4.1: Binary fission in *Amoeba*.  
CELL DIVISION IN AN AMOEBIA**





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