

CHAPTER-8

HOW DO ORGANISMS REPRODUCE?

HOTS: (High Order Thinking Skill) Questions with Answers:

- Q.1) Why is variation beneficial to the species but not necessary for the individual?
- Q.2) What is the advantage of reproduction through spores in the case of Rhizopus?
- Q.3) The simple animals such as planaria can be cut into number of pieces and each piece grows into a complex organism. What is this process known as?
- Q.4) Name the unicellular organism which caused the disease known as kala-azar.
- Q.5) Which process taking place in the nucleus of a cell leads to variation in the offspring during reproduction?
- Q.6) What causes joining up of stock and scion in grafting technique of vegetative propagation in plants? Define the terms stock and scion. Name one positive trait each of the plant contributing scion and stock should have.
- Q.7) Which type of layering is done in Jasmine?
- Q.8) Where does fertilization takes place in human female?
- Q.9) Why is it said that “sexual reproduction promotes diversity of characters in the offsprings”?
- Q.10) What happens if the fallopian tubes are partially blocked and the ovulated eggs are prevented from reaching the uterus?
- Q.11) Name the causative organism of syphilis and gonorrhoea.
- Q.12) Why are variation possible in progeny of sexually reproductive individuals?

ANSWERS

- Ans-1) Variation is beneficial to the species as it enables a species for its survival. A favourable variation makes an organism to live better in a changed environment and an unfavourable variation will not. So it is not necessarily true that a variation is beneficial to the individual always.
- Ans-2) The spores are covered by thick walls that protect them until they come into contact with aother moist surface and can begin to grow.
- Ans-3) Regeneration
- Ans-4) Leishmania
- Ans-5) DNA copying
- Ans-6) The stock and scion unite due to cambial cavity. **Stock** is the portion on which grafting is done and it provides the roots. **Scion** is the portion of the plant which is grafted on the other plant and it contributes the stem. The plant contributing scion should have large sized fruits and the plant contributing stock should have deep root system.
- Ans-7) Air Layering (Gootee)
- Ans-8) Oviduct (fallopian tube)
- Ans-9) It is because sexual reproduction results from the fusion of two gametes coming from two different and sexually distinct individuals. This leads to variation, is necessary for evolution.
- Ans-10) Fertilization may take place but the zygote may develop in the tube instead of uterus.
- Ans-11) Treponema pallidum and Nisseria gonorrhoeae.

Ans-12) Variations are possible in progeny of sexually reproductive individuals because copy of DNA in newly formed cell is not identical to copy DNA of original cell.

QUESTION BANK FOR PRACTICE

- Q1) Name those parts of the flower which serve the same function as the following do in the animals
- (1) Testes (2) Ovary (3) Eggs (4) Sperms
- Q2) 'Malarial parasite' divides into many daughter individuals simultaneously by multiple fission state an advantage the parasite gets because of this type of reproduction.
- Q3) Is copy of DNA formed identical to original cell? If yes or no, how is it beneficial to a species?
- Q4) An individual may have a good health even when the whole of reproductive system is removed. What is the function of the reproduction system then?
- Q5) Grafting is a common method of obtaining a superior plant from two different plants. Explain.
- Q6) The buds produced in the notches along the leaf margins of Bryophyllum plant fall on the soil and develop into new plants. Which type of reproduction is this?
- Q7) What is the name of the yellow powdery substance present in the anther of a flower.
- Q8) What substances are contained in oral pills used as contraceptives.
- Q9) Which life process ensures that a plant or animal species will not disappear from the earth?
- Q10) Fertilization is possible if ovulation has taken place during middle of the menstrual cycle. Give reasons.
- Q11) Why is the female reproductive system more complex than the male reproduction system?
- Q12) A potato is cut into a number of small pieces, these potato pieces are placed on wet cotton kept in a tray. After a few days, green shoots and roots appear only from some potato pieces and not from all potato pieces why?
- Q13) What is the significance of human testis being located in the scrotum?
- Q14) How the surgery methods are misused by people to prevent pregnancy?
- Q15) Why is the number of sperms produced always more than the number of eggs produced?
- Q16) DNA copies generated will be similar but may not be identical to the original. Explain.
- Q17) After fertilization, name the part in each case which develops into
(a) the fruit (b) the seeds.
- Q18) What is meant by implantation in human reproductive system.
- Q19) Justify why the male reproductive system is called "urinogenital system".
- Q20) Justify that parthenogenesis is not the same as asexual reproduction.
- Q21) State the advantages of tissue culture in growing plants.
- Q22) What is meant by internal fertilization and external fertilization? Explain with examples.
- Q23) Mention any two functions of human ovary.
- Q24) What is the significance of syngamy and triple fusion?
- Q25) (a) Draw the diagram showing the germination of pollen on the stigma. Label style, male germ cell, ovule and female germ cell.
(b) What happens to the following parts of a flower after fertilization:

- (i) Ovule
- (ii) Zygote
- (iii) Ovary

Q26) Name the following structures:

- a. Primary sex organs in man and women.
- b. Reproductive parts of a flower.
- c. A barrier method of birth control used by human.

(Q27) What is proliferative phase during menstrual cycle?