JSUNIL TUTORIAL

Class X Biology Ch 8. How do organisms reproduce

SHORT ANSWER TYPE QUESTIONS (Each of 2 marks)

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

Ans-DNA copying helps to pass on the parental body features to offspring's. It produces variations, which are useful for the survival of species over time.

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

Ans-Organisms are normally adopted to live in a particular kind of niche. In case of alternation in the ecological conditions of that niche, the organisms would not be able to survive. Only the variants' the organisms resistant to changes would survive and grow further. Thus variation is beneficial to the species not necessarily for the individual.

3.How does binary fission differ from multiple fission?

Ans-Binary fissions results in the formation of two equally sized daughter cells, whereas multiple fission results in the formation of many daughter cells.

4. How will an organism be benefited if it reproduces through spores?

Ans-An organism if it reproduces through spores in the following ways:

a. Spores are formed in large number.

B.Spores have an outer thick wall that protect them in adverse conditions until they come in contact with another moist surface and begin to grow.

5. Can you think of reasons why more complex organisms cannot give rise to new individuals through regeneration?

Ans-More complex organisms cannot give rise to new individuals through regeneration because:

i. There body is highly complicated.

ii. There are specific organ for specific functions.

iii. There is a labour division in the body of complex organisms.

iv. Regeneration is carried out by specialized cells which are not present in complex organisms.

6. .Why vegetative reproduction is practiced for growing some type of plants?

Ans-Vegetative reproduction is practiced in some types of plants due the following reasons:

1. The plants which do not produce viable seeds are propagated by vegetative propagation such as banana, orange and rose.

2. Plants raised by vegetative propagation bear flower and fruit earlier than those produce from seeds.

3. Seedless fruits are produced by vegetative propagation.

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

Ans-a) DNA copying provides cellular apparatus in the daughter cells.

b)DNA copying is essential for obtaining exact body design.

c) It is essential for inheritance of features from parents to offspring.

8. . What are the changes seen in girl's at the time of puberty?

Ans-Various changes take place in girl's body at the time of puberty :

a)Thick hair growth in the arm pit and genital area.

b) Oily skin and appearance of pimples

c) breast size begins to increase

d) Girls begins to menstruates etc.

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

Ans—The secretion of seminal vesicles activates and nourishes the sperms whereas the secretion of prostate gland contributes the mortality and fertility of sperms.

10. How is the process of pollination different from fertilization?

Ans-Pollination is the process of transfer of pollen grains from anther to stigma whereas fertilization is the process of fusion of male gamete with a female gamete to form zygote.

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

Ans-The embryo gets nourishment inside the mother's body through placenta.This tissue contains villi on the embryo's side and is surrounded by blood from the mother's side. Substances like glucose and oxygen pass from the mother's blood to the embryo through villi.

12.If a women is using copper –Twill it help in protecting her from sexually transmitted diseases?

Ans-No, because copper-T helps in preventing pregnancy ,but not provide protection against sexually transmitted diseases.

13.Show by a series of labeled diagram, the manner in which reproduction in Hydra.

Ans-Hydra reproduces by budding using the regenerative cells. A bud develops as a outgrowth in hydra due to repeated cell division of specific site, when full mature, the bud detaches from the parent's body and develop into new individuals.

14.Describe regeneration. Fig-

Ans-It is ability of a fully differentiate organisms to give rise to new individual from its body parts. For example-Hydra and Planaria. If Hydra is cut into two or more pieces grow into new and complete Hydra .This is known as regeneration.

15.Define the terms unisexual and bisexual flowers by giving one example of each.

Ans-Unisexual flower means flower which contain only one sex organs either stamen or carpel but not both.ex-papaya, watermelon. Bisexual flower means flowe which contain both stamen and carpels. Ex- hibiscus.

16.Leaves of the bryophyllum fallen on the ground produce new plants whereas the leaves of rose donot. Why?

Ans-Leaf of bryophyllum show vegetative propagation in plants where a part of the body becomes detached and develop into a new supporting plant..Here leaves of bryophyllum having plantlets along the margine of the leaf, while this structure is absent in rose plant.

Q.17. Why does menstruation occur?

Ans. The removal of the inner, thick and soft lining of the uterus along with its blood vessels as well as blood in the form of vaginal bleeding is called menstruation. In humans after a girl attains puberty ovaries start producing mature ovum every month and also uterus lining gets thickened to receive zygote. When the uterus does not receive any zygote then menstruation occurs to excrete lining of uterus and degenerating ovum.

Q. 18. What are the different methods of contraception?

Ans. The different methods of controlling the child birth are –

(1) Hormonal methods: Various kinds of pills containing hormones which prevent the release of egg from the ovary, without interfering with other phases of menstrual cycle, are taken orally.

(2) Barrier method: These are the physical and chemical barriers which prevent the sperms meeting the egg. Physical devices such as condoms, diaphragms and cervical caps are used.

(3) Intrauterine Devices: Commonly called as I.U.Ds, they are the devices made of plastics and come in different shapes. The most commonly among these is copper- 'T'. These devices are placed inside the uterine cavity and permanently kept there. It prevents the implantation in the uterus.

(4) Surgical methods. The surgical methods are safe and permanent.

(i) Vasectomy. In this operation, a small piece of vas deferens is cut and removed and the two ends of the cut vas deferens are tied.

(ii) Tubectomy. In this operation, fallopian tubes are cut, tied with nylon thread to close the passage, which prevents the passage of eggs.

Q.19. How are the modes of reproduction different in unicellular and multicellular organisms?

Ans. Unicellular organisms contain only one cell so they reproduce by asexual reproduction.

Example: budding, binary and multiple-fission are some of the asexual methods. Multicellular organisms which have complex body designs (have organ systems) ex. Humans, animals, plants reproduce sexually.

Q.20. How does reproduction help in providing stability to populations of species?

Ans. Reproduction is the process through which an organism produces new organism of its own kind.

It is necessary because in a population organisms die due to old age or disease thus it keeps the number of organisms in a population constant and provides stability to a population.