

Biology

- 1) The number of modes by which animals reproduce are a) two
- 2) Asexual reproduction is observed in c) sponge
- 3) The main function of guard cells is to help with a) Transpiration
- 4) Transpiration is regulated by the movement of b) Guard cells
- 5) Ecosystem has two components c) biotic and abiotic
- 6) Which chromosome does the unfertilised egg contain?
A) It contains X chromosome. The sperm contain either an X or a Y chromosome.
- 7) Which hormone balances the ~~po~~ proportion of salts in the blood?
A) Thyroxine hormone
- 8) What do you mean by reproductive health?
A) A state of physical, mental and social well-being of a person in all matters relating to the reproductive system at all stages of life.
- 9) Which hormone is released by pancreas? What is its function?
A) Insulin → Regulates the amount of sugar in the blood.

Glucagon → Releases sugar from the liver.

10) What is artificial ecosystem?

A) An artificial ecosystem is a human-made system of plants, animals and people living in an area together with their surroundings.

11) Differentiate between food chain and food web.

A) Food chain

Food web

* Food chain is the linear sequence of organisms in which each organism eats the lower member and is itself eaten by the next higher member.

* Food web is a network of several interconnecting food chains.

12) What are ecological pyramids?

A) An ecological pyramid is a graphical representation of the relationship between the different living organisms at different trophic levels.

13) Name two plants which reproduce through spores.

A) Ferns and mosses.

14) Why is regeneration considered a method of reproduction?

A) Regeneration is considered as a method of reproduction because through this process and organism can multiply and form new individuals.

15) Which vegetative part is used in the propagation of Bryophyllum and mint?

A) Leaf.

16) A mother is afraid angry at her child for misbehaving. The child is also afraid of scolding. Which hormones would be released in both their bodies? What will be effect of the hormone?

A) When the mother is angry and the child is afraid more adrenalin would be released from adrenal gland. Due to this there will be heavy sweating and lowering of body temperature.

17) a) Which organ is responsible for implantation of zygote? b) State the function of zygote? How is the sperm genetically different from the egg? Fallopian tube?

A) Uterus

b) To collect the matured ovum from ovaries and provide passage to the unfertilised ovum to reach the uterus for implantation.

18) What would be the ratio of chromosome number between an egg and its zygote? How is the sperm genetically different from the egg?

A) The ratio of chromosome number between egg and its zygote is 1:2. An egg is a female gamete it has haploid number of chromosome. During fertilization it fuses with male gamete (also having haploid number of chromosome). Sperm and eggs are genetically different in terms of nature of sex chromosome. The sperm contain either X or Y chromosome whereas an egg will always have an X chromosome.

19) How does the embryo developing inside the its mother's womb obtain its nutrition?

A) The embryo grows inside the mother's womb and gets nourishment from the mother's blood through the tissue called placenta.

20) What changes are observed in the uterus subsequent to implantation of young embryo?

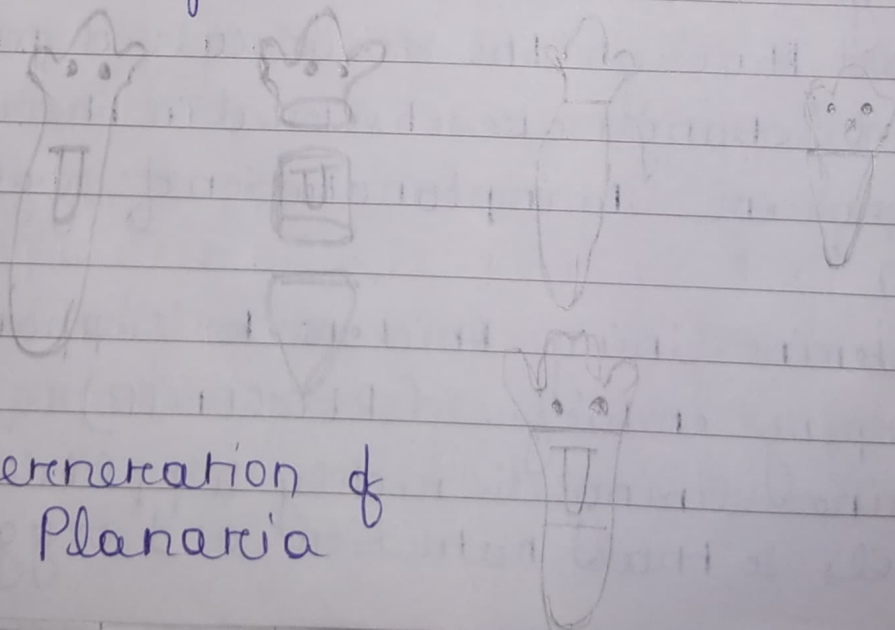
A) • Uterine lining thickens to support to developing embryo. (PLACENTA)
• Uterine lining is richly supplied with blood vessels so that nutrition and oxygen could be

Supplied to the developing foetus.

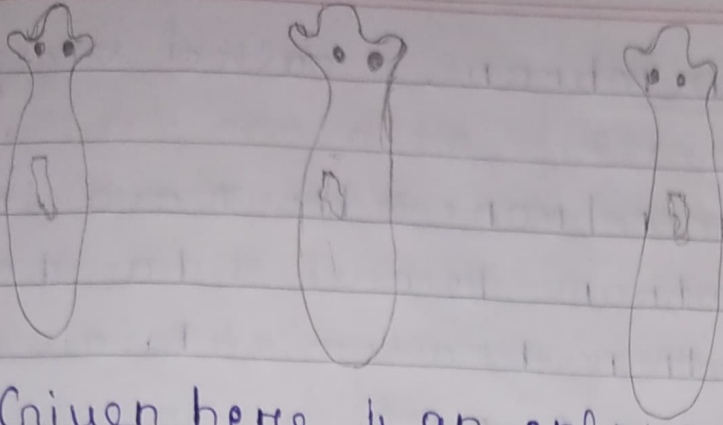
2) Why are budding, fragmentation and regeneration all considered as asexual types of reproduction? With neat diagrams explain the process of regeneration in Planaria - a?

A) Budding, fragmentation and regeneration are considered as asexual types of reproduction because none of them includes gamete formation and fertilization. All of these give rise to offspring from single parent only.

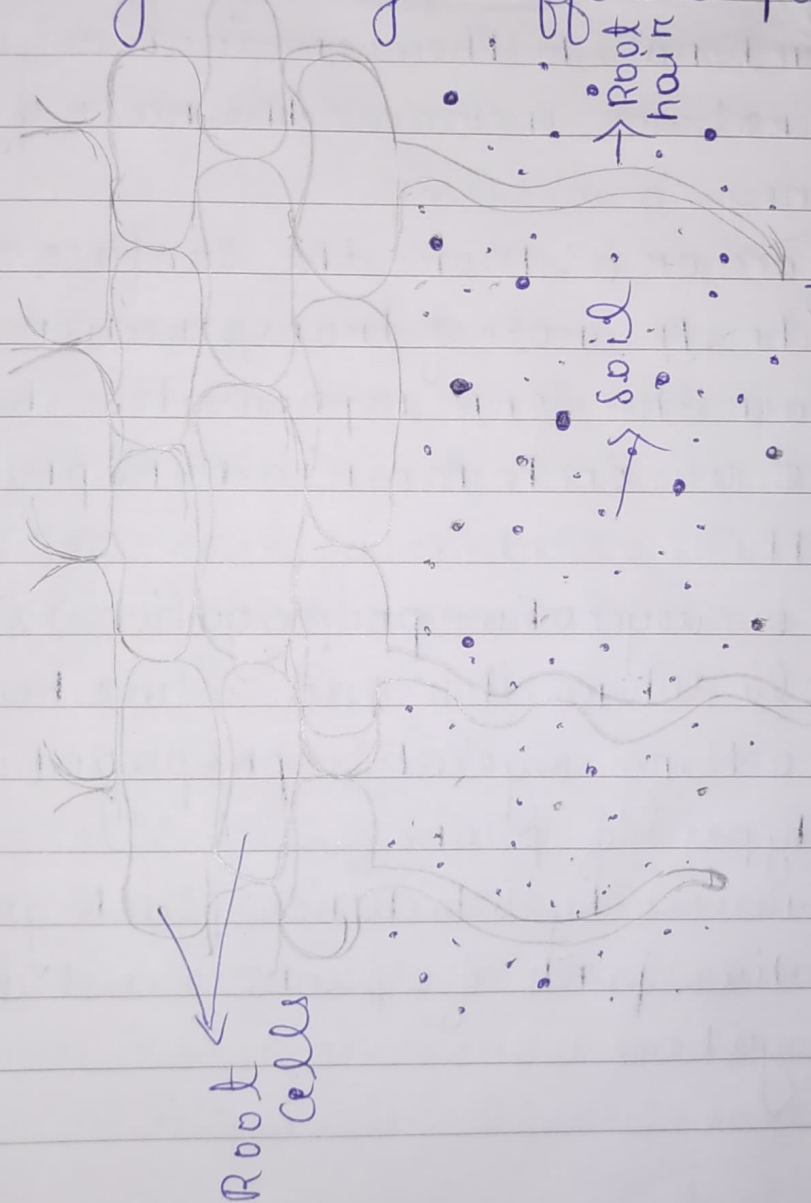
Regeneration in Planaria:- It exhibits ~~regener~~ regeneration ability to grow the broken body part again. If the body of Planaria is cut into any number of pieces, each piece grows into a complete organism reproductive through regeneration.



Regeneration of Planaria



22) Given here is an enlarged diagram of a part of the root. Draw root. Draw arrows on the diagram to show the movement of water passing through different parts.



movement of water from
root hair to xylem vessels.

23) Why plasma membrane is called semipermeable membrane?

A) The plasma membrane is known as a selectively permeable membrane because it has the ability to decide whether to allow substance inside and outside the cell or not.

24) What are the factors affecting the rate of diffusion?

A) 1. Temperature - The rate of diffusion is directly proportional to the temperature. As the temperature increases the rate of diffusion increases.

2. Surface area: More the surface area more will be the rate of transpiration.

25) Explain the term reproductive health, what should we do to maintain reproductive health?

26) What is vegetative propagation? Write two examples where it is used. State two reasons of practicing vegetative propagation for giving some types of plants.

A) The process by which new plants grow from the vegetative parts of a plant is called vegetative propagation.