

1) what happens when -

a) Accidentally, planaria gets cut into many pieces?

When planaria gets cut into many pieces, it will undergo a process known as regeneration due to which each piece will grow into a new planaria.

organism

b) Bryophyllum leaf falls on the wet soil? When Bryophyllum leaf falls on the wet soil, the buds that are produced in the notches along the leaf will develop into new plants by the process known as vegetative propagation.

c) On maturation sporangia of Rhizopus bursts?

When the sporangia of Rhizopus bursts on maturation, the spores present inside it spread in the open environment. Then with the help of different agents, they are carried to different places and when they land on a favorable surface they start growing and produce new organisms.

2) i) Differentiate between binary & multiple fission.

Binary fission

→ Two new individuals are formed from one old individual at one time.

→ The division of nucleus and cytoplasm takes place initially.

→ The axis of division can be transverse, longitudinal or any one axis as it is in simple binary fission.

→ Ex - bacteria, Euglena

ii) Vegetative propagation is beneficial to plants that are propagated asexually, Give two advantages.

Advantages -

Multiple fission

→ Many new individuals are formed from one old individual at one time.

→ Only nucleus divides initially - followed by division of cytoplasm.

→ There is no exact axis for the fission.

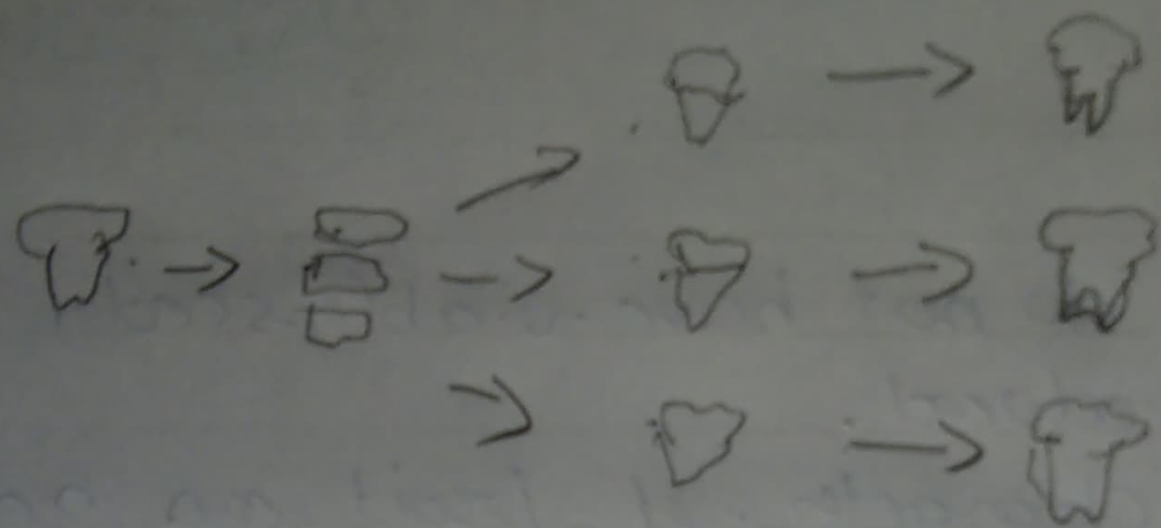
→ Amoeba, Monocystis

- o Plants that do not have viable seed, can be reproduced.
- o Desirable characters of fruit can be maintained

3) i) With the help of a diagram demonstrate the process of regeneration as seen in Hydra.

Planaria is a type of flatworm. It has the amazing capacity to regenerate its lost body part. When the flatworm is cut horizontally, separating the head from the tail, the tail will regenerate the lost head and the head will regenerate the lost tail. This process is known as regeneration.

ii) Which type of cells are used by such multicellular organisms to regenerate? Specialized cells or regenerative cells.



Regeneration in Planaria