

Q1. How does binary fission differ from multiple fission?

A Binary fission

- The cell divides into two producing two daughter individuals
- Nucleus & cytoplasm divide simultaneously
- Amoeba shows binary fission

Multiple fission

- The cell nucleus divides many times within the cell to produce daughter cell nuclei.
- The nucleus divides into many nuclei & later each nuclei is surrounded by cytoplasm & daughter nuclei are released by rupture of parent cell
- Plasmodium - Ex.

Q2. How will an organism be benefited if it reproduce through spores?

- large no. of spores are produced in one sporangium.
- spores are distributed easily by air to far-off places to avoid competition at one place.
- spores are covered by thick walls to prevent dehydration under unfavourable conditions.

Q3. Can you think of reasons why more complex organisms cannot give rise to new individuals through regeneration?

A. ~~Higher Complex organisms~~ <sup>Because complex organisms</sup> have organ-system level of organization. All organ system of their body work together as an interconnected unit. They can regenerate their lost body parts such as skin, muscle, blood. They cannot give rise to new individual through regeneration.

Q4. Why is vegetative propagation practiced for growing same types of plants?

- A
- It is only method of reproduction in seedless plant like banana, orange, etc.
  - It is a short cut method for rapid multiplication.
  - It is very easy & economical process for multiplication of ornamental plants.
  - The plants produced by this method can bear flower & fruits earlier than those that are produced by seeds.

Q5. Why is DNA copying is an essential part of process of reproduction?

A DNA replication process by which two copies of DNA molecules produced from one. The creation of a DNA copy is essential to produce organisms which are similar to their parent.

As copying of DNA brings some variations each time, the surviving cells are similar to parent cell but subtly different from each other. This tendency for variations during reproduction brings variations among the individuals of same species.