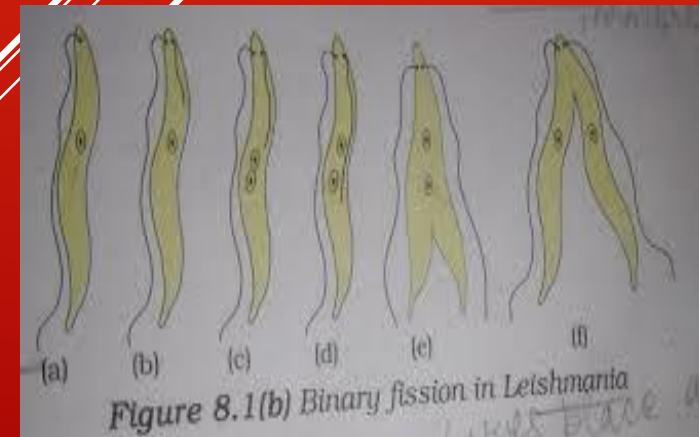
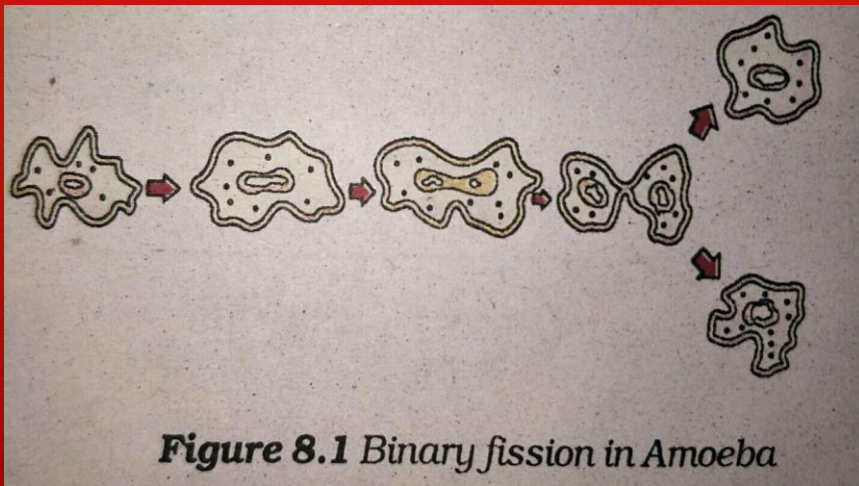


METHODS OF ASEXUAL REPRODUCTION

1. **FISSION:** a fully grown organism divides into two or more daughter cells.

IT IS OF THE FOLLOWING TYPES:

A) **BINARY FISSION:** a fully grown organism divides into two daughter cells under favourable conditions Eg: amoeba, paramecium, euglena. In amoeba plane of division does not matter, in Leishmania it is in definite orientation in relation to its structure. (causes kalaazar)

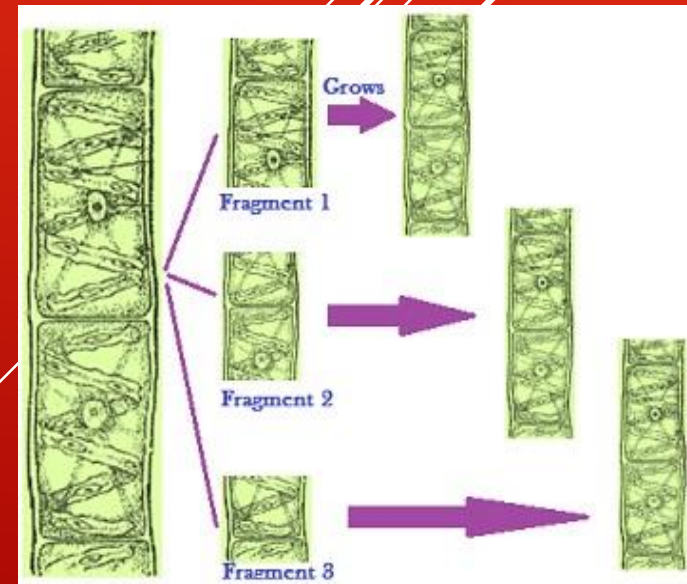
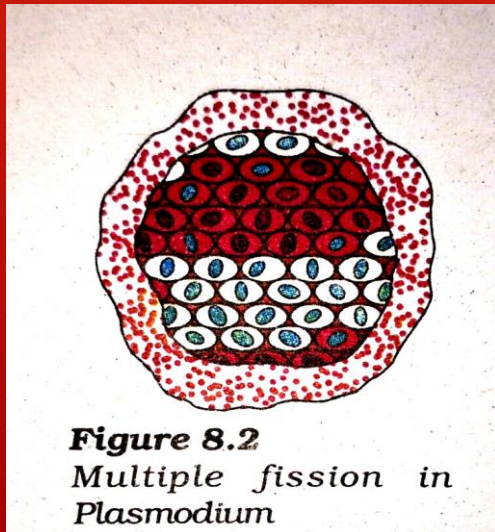


B) MULTIPLE FISSION AND FRAGMENTATION

MULTIPLE FISSION: In this a fully grown organism divides into more than two daughter cells under unfavourable conditions.

A PROTECTIVE CYST WALL IS CREATED WHICH PROTECTS THE ORGANISM DURING UNFAVOURABLE CONDITIONS. EG: PLASMODIUM

2. **FRAGMENTATION**- (diagram on right) BREAKING OF PARENT BODY INTO TWO OR MORE FRAGMENTS BY WAVE ACTION OR BY DEATH AND DECAY OF OLDER PARTS Eg: Spirogyra , Flatworms etc.



3. REGENERATION

In this mode following events take place:

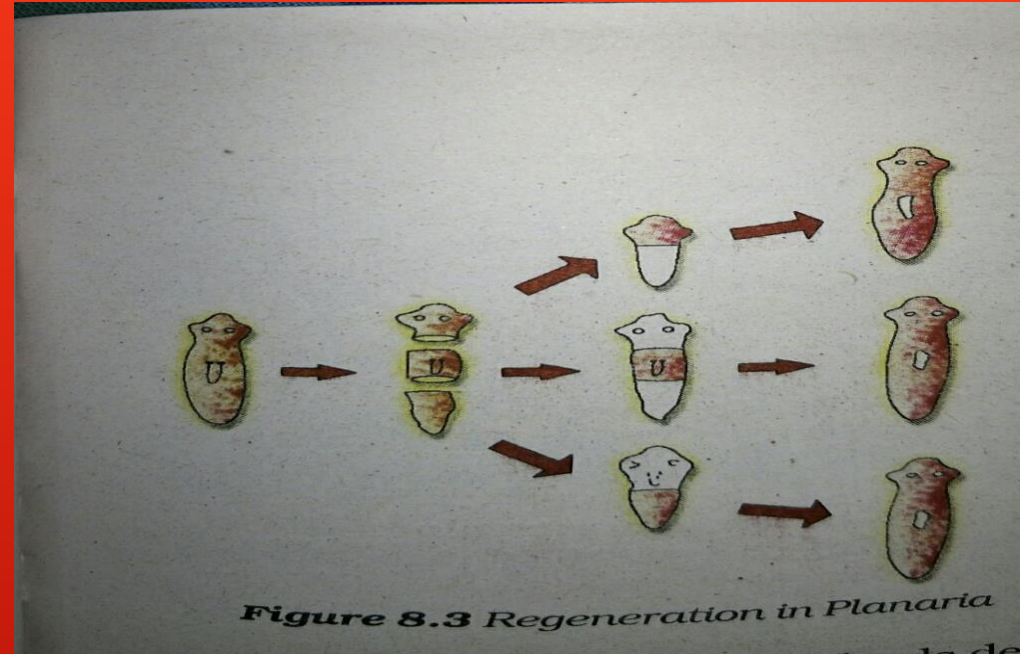
1. Repair of damaged tissues
2. Replacement of broken body parts
3. Reconstruction of the whole organism from a small fragment. (see fig of planaria in previous slide)

REGENERATION IS CARRIED OUT BY SPECIALISED CELLS which proliferate to make large number of cells and afterwards different cells undergo differentiation to form various cell types and tissues. These changes take place in an organised sequence called development.

NOTE: Regeneration is not the same as reproduction since most of the organisms would not normally depend on being cut to be able to reproduce.

(more complex multicellular organisms cannot give rise to new individuals through regeneration as they have division of labour wherein specialised cells are organised as tissues and organs which have specific location in the body and hence cell by cell division is impractical)

DIAGRAM OF REGENERATION



SPORE FORMATION

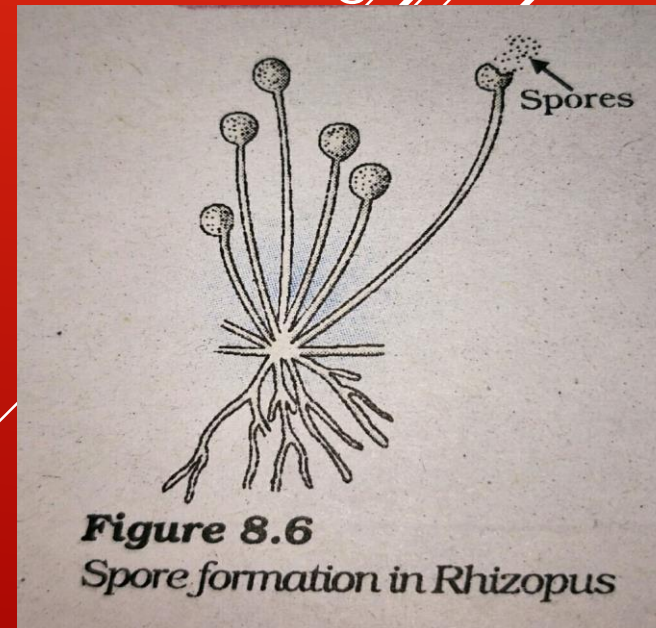
SPORE FORMATION

Spore is a reproductive unit in organisms like fungus, some bacteria, mosses, ferns etc.

Spores are covered by thick walls that protects them during unfavourable conditions

Spores are formed in structure called sporangium which is present in fungal hyphae.

When sporangium breaks open spores are liberated and germinate under suitable conditions.



THANK YOU

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A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, located in the lower right quadrant of the slide.