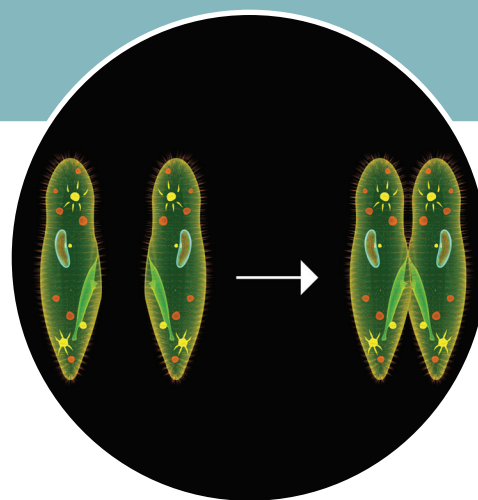


1

CHAPTER

UNIT - I

Reproduction in Organisms



Paramecia is capable of both sexual and asexual reproduction.

Chapter Outline

- 1.1. Modes of reproduction
- 1.2. Asexual reproduction
- 1.3. Sexual reproduction



Learning Objectives

- *Learns the modes of asexual reproduction in organisms.*
- *Understands the significance of asexual reproduction.*
- *Comprehends the different modes of sexual reproduction.*
- *Realizes the significance and advantage of sexual reproduction and its role in evolution.*



Living organisms show a life cycle involving birth, growth, development, maturation, reproduction and death. Reproduction is the fundamental feature of all living organisms. It is a biological process by which organisms produce their young ones. The young ones grow and mature to repeat the process. Thus reproduction results

in continuation of species and introduces variations in organisms, which are essential for adaptation and evolution of their own kind.

1.1. Modes of reproduction

All modes of reproduction have some basic features such as synthesis of RNA and proteins, replication of DNA, cell division and growth, formation of reproductive units and their fertilization to form new individuals. Organisms exhibit two major modes of reproduction namely asexual and sexual reproduction. Reproduction by a single parent without the involvement of gamete formation is **asexual reproduction** and the offspring produced are genetically identical. Asexual reproduction is usually by amitotic or mitotic division of the somatic (body) cells, hence is also known as somatogenic or blastogenic reproduction. When two parents participate in the reproductive process involving two types of gametes (ova and sperm), it is called **sexual reproduction**.

1.2. Asexual reproduction

Asexual reproduction is wide spread among different organisms. It is common in members of Protista, Bacteria, Archaea and