Fungi, singular fungus, are eukaryotes that are characterized by the presence of chitin in the cell wall. Because fungi are eukaryotic organisms, they have a distinct nucleus surrounded by a nuclear membrane. Fungi are further divided into six groups on the basis of the appearance of the spore;

Glomeromycota, Ascomycota, Basidiomycota, Chytridiomycota, Blastocladiomycota, and Zygomycota. Fungi are essential organisms as most of them are used for the extraction of antimicrobial products for pharmaceutical industries. Common fungi include microscopic organisms like molds and yeasts and macroscopic organisms like mushrooms. Fungi are the principal decomposers in the ecosystem which convert complex organic compounds into inorganic compounds. The haploid spores combine via cell fusion to form a diploid zygote. These organisms absorb their nutrients from secreting digestive enzymes to the environment. Reproduction in fungi mostly occurs via budding and sporulation