



MICROBIOLOGY- CLASSIFICATION OF MICROORGANISMS

- Ms. Preeti Samuel

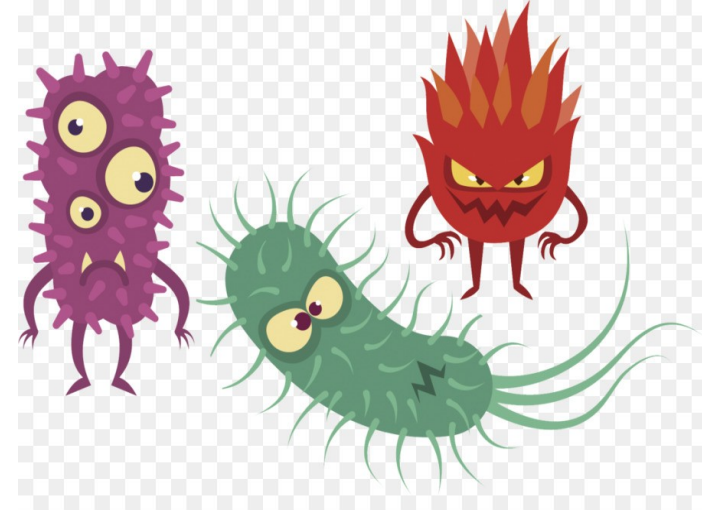
INTRODUCTION

- Classification of any field of science means the orderly arrangement of units under study into groups of larger units.
- Present day classification in biology was established by Carolus Linnaeus.



CLASSIFICATION:

- Classification on the basis of :
 1. Of body and nuclear organization
 2. Of morphological characteristics
 3. Of nutritional requirements
 4. Of oxygen requirements
 5. Of temperature requirement
 6. Of distribution
 7. Of host resistance or pathogenecity



1. CLASSIFICATION ON THE BASIS OF BODY AND NUCLEAR ORGANIZATION

- Body organization microorganism:
 1. Microbes beyond cellular organization
 2. Microbes with cellular organization
- On the basis of nuclear organization
 1. Prokaryotes
 2. Eukaryotes



2. CLASSIFICATION ON THE BASIS OF MORPHOLOGICAL CHARACTERISTICS

- According to shape of bacteria

1. Cocci
2. Bacilli
3. Bacteria without stable shape

- According to their size

1. Higher bacteria
2. Lower bacteria

- According to their flagella

1. Monotrichous
2. Amphitrichous
3. Lopotrichous
4. Peritrichous

- According to their staining reaction

1. Gram positive
2. Gram negative
3. Acid fast organism
4. Non acid fast



3. CLASSIFICATION ON THE BASIS OF NUTRITIONAL REQUIREMENTS

1. Photoautotrophs
2. Chemoautotrophs
3. Photoheterotrophs
4. Chemoheterotrophs



4. CLASSIFICATION ON THE BASIS OF OXYGEN REQUIREMENTS

1. True aerobes
2. True anaerobes
3. Facultative aerobes
4. Facultative anaerobes



5. CLASSIFICATION ON THE BASIS OF TEMPERATURE REQUIREMENT

1. Psychrophilic or cryophilic
2. Mesophilic
3. Thermophilic



6. CLASSIFICATION ON THE BASIS OF DISTRIBUTION

- Hydrospheric or aquatic
- Lithospheric or terrestrial
- Atmospheric or aerial



7. CLASSIFICATION ON THE BASIS OF HOST RESISTANCE OR PATHOGENECITY

1. Pathogens
2. Non- pathogens



THANK YOU

