

**300 Marks**  
**الامراض المعدية**  
 10 MCQ  
 3 Assessment  
 48 mark MCQ  
 End of Module  
 48 marks  
 Practical  
 64 marks  
 Written

**Microbiology**  
 5 Lec. General Micro  
 12 Lec. Immunology  
 18 Lec. Syst. Bacteriology  
 7 Lec. Syst. Virology  
 1 Lec. Syst. Mycology  
 3 Lec. Applied micro

**Chapter 1: Microbiology**

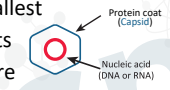
**M.O.**  
 (1 Cell → All Functions)

**Primitive Prokaryotic M.O.**  
 Nucleus  
 • Smaller, simpler  
 • No memb. bound nucleus (Nucleoid or Nuclear region)  
 • No mitochondria and No other membrane bound organelles  
 • 70S Ribosome  
 • No Sterols in cell memb. **except Mycoplasma**  
 • **Bacteria**

**True Eukaryotic M.O.**  
 Nucleus  
 • Larger, more developed  
 • Distinct Nucleus (with Nuclear memb.)  
 • Contain mitochondria and other memb. bound organelles  
 • 80S Ribosome  
 • Contain Sterols in cell memb.  
 • **E.g.:-**

**Viruses**

- One of the smallest infective agents
  - No cell structure
  - Obligate I.C parasite **G.R.**
- Require host cell machinery for survival + Reproduction



**Simpler Forms**

- Viroids**  
 (Protein free)  
 ssRNA → disease in plants
- Prions**  
 (Protein Infection agent)  
 No nucleic acid

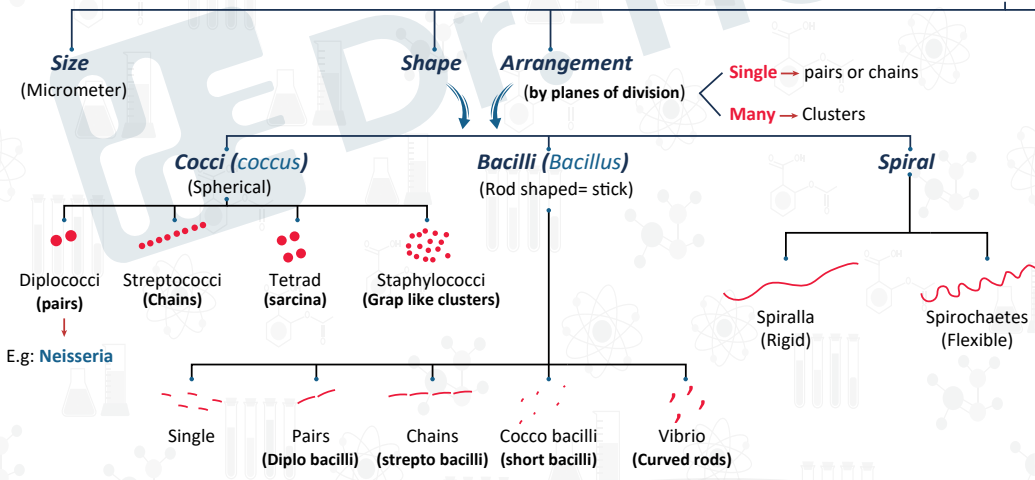
- Mycoplasma
- Chlamydia
- Rickettsia
- Arachaeobacteria (Of no medical importance)
- Blue green Algae (Don't cause infection (but produce potent toxin → affect people drinking polluted water))

- Animals
- Plants
- Fungi
- Protozoa
- Slime moulds (Of no medical importance)
- Algae # Blue green Algae (Of no medical importance)

**Chapter 2: Bact. Structure**

**General Micro (1)**

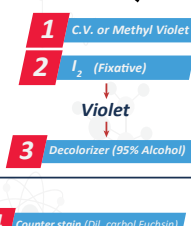
**Bact. Morphology**



**Simple**

- 1 Dye (M.B., C.V., Carbol fuchsin)
- Cells stained → same color
- Reveal

- Size
- Shape
- Arrangement



Not decolorized (violet) → Violet → Gram (+VE)

Decolorized (colorless) → Red → Gram (-VE)

**Stains**

**Differential**

- > 1 Dye
- Distinguish between bact. by giving them different colors

**E.g**

**Gram stain**  
 (Most imp. Diff. stain)

Gram (+) Violet

Gram (-) Red

**Ziehl-Neelsen stain**  
 (2<sup>nd</sup> imp. Diff. stain)

Acid fast bacilli (AFB) (Mycobacterium) → Pink

Non AFB → Blue