

BIOS 242 – Week 4 Midterm Study Guide (2025)

Midterm

Microbiology:

- Specialized area of biology that studies living things too small to be seen without magnification

5 Groups of microorganisms:

1. Bacteria
2. Viruses
3. Protozoa
4. Helminths- tapeworms, round worm, flukes
5. Fungi

Eukaryotes:

- **HAS** nucleus
- Fungi, protozoa, algae

Prokaryotes:

- **NO** nucleus
- Bacteria and archaea

Bacteria is Ubiquitous: present everywhere at the same time

Decomposition:

- The breakdown of dead matter accomplished by bacteria and fungi

Louis Pasteur:

- Invented pasteurization- High heat to get rid of most bacteria- Beer, Wine, Cheese
- Proved spontaneous generation **FALSE** and proved biogenesis **TRUE**
- Showed that human disease can arise from infection

Koch's Postulate **KNOW THIS FOR ESSAY QUESTION**

- **Koch** Linked specific organism with specific disease
- **Leuwenhoek** founded the microscope which helped him look at the organisms
- **Pasture**-

Types of microscopes:

1. Compound microscope: learning and research- we use these in lab
2. Scanning Electron Microscope SEM: 3D look at surface of a cell membrane and morphology
3. Transmission Electron Microscope TEM: 2D high magnification to see internal structures of sample

5 I's

1. Inoculation
2. Incubation
3. Isolation
4. Inspection
5. Identification

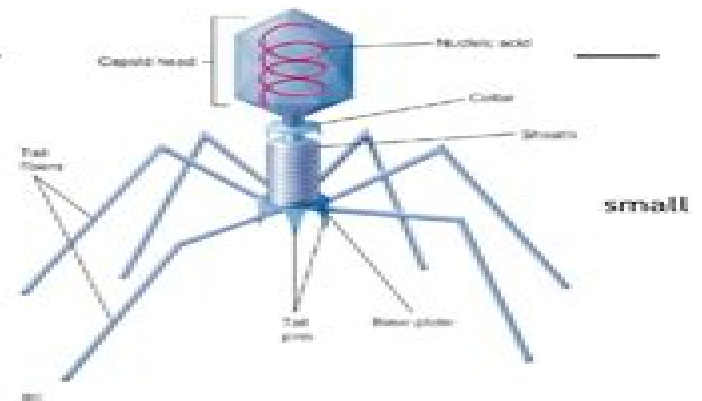
Selective Media:

- Nutrient media designed to favor growth of certain microbes and keep out unwanted competitors

Differential Media:

- Allows multiple types of organisms to grow but are designed to visibly display the differences between specimens

Viruses:



Peregrine Academic Services Study Guide

Julia Schneider



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