

CLASS REVIEW SESSION I

- I. SCOPE AND HISTORY
 - NAMES [DATES] AND DISCOVERIES
 - MICROBIOLOGY AND INFECTIOUS DISEASE
 - BACTERIAL NAMES - MORPHOLOGICAL TYPES
- II. A BACTERIAL CELL
 - SIZE, SHAPE & CHEMISTRY
 - INTRODUCTION TO BIOCHEMISTRY:
 - CARBOHYDRATES - SUGARS
 - LIPIDS - FATTY ACIDS
 - PROTEINS - AMINO ACIDS
 - NUCLEIC ACIDS - NUCLEOTIDES
- III. MICROSCOPY AND STAINING
 - THE LIGHT MICROSCOPE
 - SIMPLE, DIFFERENTIAL & SPECIAL STAINS
 - THE GRAM STAIN, THE ACID-FAST STAIN
- IV. PROKARYOTES VS. EUKARYOTES
 - SIZE & COMPLEXITY
 - ORGANELLES & ORGANIZATION
 - EUKARYOTIC CELL CYCLE
- V. BACTERIAL MORPHOLOGY
 - THE CYTOSOL
 - THE ENVELOPE: GRAM +, GRAM -, ACID FAST
 - APPENDAGES
- VI. METABOLISM: AN OVERVIEW
 - GLYCOLYSIS, TCA CYCLE, ELECTRON TRANSPORT
 - FERMENTATIONS (VS. RESPIRATION)
 - CATABOLISM & ANABOLISM; CONTROL (FEEDBACK INHIBITION)
- VII. GROWTH (& NUTRITION)
 - CHEMICAL & PHYSICAL GROWTH REQUIREMENTS
 - TROPHISMS
 - MEDIA
 - GROWTH CURVES & COUNTING BACTERIA
- VIII. CONTROL OF MICROORGANISMS
 - DEATH CURVES
 - STERILIZATION, PASTEURIZATION, ETC.
 - FILTRATION, RADIATION & CHEMICAL TREATMENTS
- IX. MICROBIAL GENETICS
 - DNA STRUCTURE AND REPLICATION
 - RNA STRUCTURE AND TRANSCRIPTION
 - PROTEIN STRUCTURE AND TRANSLATION
 - DNA TRANSFERS: DONOR TO RECIPIENT
 - TRANSFORMATION - FREE DNA
 - TRANSDUCTION - VIRAL (PHAGE) MEDIATED
 - CONJUGATION - MATING TYPES: F⁺ → F⁻