

Microbiology test questions assignment



**ASSIGN
BUSTER**

A complex aggregation of microbes, often found on a solid surface, is called a biofilm. A thin film of microorganisms on the surface of a microscope slide is a(n) 9. 110. The gelatinous covering around the cell wall of many microorganisms is called capsule; a resistant, dormant structure formed within a bacterium that protects it from extreme environmental conditions is a(n) 11. 112. The science of classifying organisms is called taxonomy. The study of the evolutionary history of organisms is called phylogenetics. Microbiology 233/Dry. Braun/Practice Test #1 - 2 13. 114. A pure culture of organisms is called a(n) monoculture. Genetically related groups are called 15.

The highest level of classification is called a(n) domain. SHORT ANSWER. (40 points) 16. A. Name the groups at the level of classification referred to in #15. B. What is the basis for distinguishing the groups at this level? 17. Compare and contrast the theories of spontaneous generation and biogenesis. 18. A. Briefly state Koch's Postulates. B. Why are these important? Microbiology 233/Dry. Braun/Practice Test # 19. A. In descending order, list the 7 major levels of classification. B. Explain or describe a binomial, in scientific nomenclature. Give 2 specific examples. 20.

List the 4 major groups of eukaryotic organisms, and the key characteristics of each one. B. Microbiology 233/Dry. Braun/Practice Test #1 - 4 TRUE / FALSE. (30 points) Circle TRUE or FALSE for each statement. Extra Credit: For each statement you think is false, correct it by crossing out the word(s) that make it false and adding word(s) to make it true. Do not rewrite the whole statement. 21. Microorganisms are identified and classified according to various methods, including morphological features, biochemical tests, differential staining and the type of virus a bacterium is susceptible to.

TRUE / FALSE . Methods of comparing the DNA of different organisms include: DNA fingerprinting, Southern blotting, serological testing and nucleic acid hybridization. TRUE / FALSE . Both DNA and RNA can be used to identify microbes. 24. Phylogeny relationships can be determined by a "molecular clock", which is based on the fact that genetic mutations occur at a fairly constant rate over time. 25. Archaea include both gram-negative and gram-positive bacteria, but none are pathogenic. 26.

Photosynthetic bacteria include Cyanobacteria, green and purple bacteria, and anoxygenic photosynthetic bacteria; oxygen is produced only by the bacteria that use sulfur as an electron acceptor. Gram-positive Bacteria are divided into 2 groups, based on the amount of AT and cytosine they have in their DNA. Guanine 28.

The main difference between fungi and bacteria is the chemical composition of their cell walls. FALSE Microbiology 233/Dry. Braun, 'Principles of Microbiology' - 5 29.

The main difference between algae and plants is that algae do not have roots, stems and leaves. Helminths are multicellular eukaryotes that have various organ systems, except arms, which rely on their hosts for vital functions. Parasitic 31. MATCHING. Microscopy (10 points) Detailed view of internal structures of living microbes. A. Phase-contrast Magnification up to 1000x; oil improves resolution. Electron Microscopy Uses 2 beams of light to improve resolution. B. Confocal C. Scanning D. E. Atomic Force Microscopy Maps atomic and molecular shapes; intracellular temperatures. Photon Fluorescence Deep images of cells in tissues; active cells in real time. G. Scanned-Probe Microscopy Pathogenic microbes within cells and tissues.

Brightfield I. Transmission Electron Microscopy Live microbes that cannot be viewed by other methods. Scanning Acoustic Microscopy Extremely clear Interference Contrast 2-

monsoonal Images. Detrimental High resolution; 3-D view; different layers of a specimen. Living cells attached to another surface, such as cancer cells and arterial plaque. Microbiology 233/Dry. Braun/Practice Test #1 - 6 32. List the 5 phyla of Bacteria, the key characteristics of each one, and a specific example (40 points) Phylum Key Characteristics with its' importance to human beings or the environment. Specific organism & its' importance