



FIRST SEMESTER EXAMINATION (2013/2014)

GENERAL MICROBIOLOGY I (MCB 311)

SECTION A

1. Among the first scientists to see microorganisms was
(a) Robert Hooke (b) Louis Pasteur (c) Joseph Lister (d) James T. Watson
2. The three basic shapes found in most common bacteria are
(a) triangles, squares, and rectangles (b) hexagons, icosahedrons, and helicals
(c) spheres, spirals, and rods (d) cubes, filaments, and rhomboid
3. Extensive studies on the microorganisms were performed in the 1670s by Dutch merchant
(a) van Leeuwenhoek (b) van Hoogensteyne (c) van Dyck (d) van Gogh
4. The theory of spontaneous generation states that
(a) Viruses are generative forms of bacteria (b) Evolution has taken place in large animals
(c) Humans have generated from apes (d) Microorganisms arise from lifeless matter
5. Louis Pasteur's contribution to microbiology was that he
(a) called attention to the importance of microorganisms in everyday life
(b) supported the theory of spontaneous generation
(c) attacked the doctrine of evolution
(d) discovered viruses

6. One structure you would NOT find in a bacteria cell is a
(a) cell wall (b) cell membrane (c) mitochondrion (d) chromosomes
7. Prokaryotes Do Have a cell membrane but Do NOT Have a
(a) ribosome (b) nucleus (c) single cell (d) cell wall
8. Whiplike structures used by bacteria for movement are called
(a) spheres (b) rods (c) flagella (d) pili
9. How do Rhizobium help plants
(a) by fixing nitrogen (b) by fixing oxygen (c) by producing toxins (d) through parasitism
10. Which of the following is **NOT** a bacterial structure that provides the type of movement indicated
(a) pilus-crawling motion (b) slime layer-gliding (c) flagellum-turning and tumbling while moving (d) spiral shaped-corkscrew motion
11. Bacterial cells pick up and incorporate DNA from dead bacterial cells in a process called

12. When cocci occur in chains, they are called _____, grapelike clusters of cocci are called _____

13. Proved living cells can arise only from other living cells

14. Confirmed the germ theory of disease

15. What is the term for using a virus to transfer DNA from one bacteria cell to another?

TRUE OR FALSE

16. All prokaryotes are microorganisms but only some eukaryotes are

17. Gram negative bacteria have a thick layer of peptidoglycan that stains purple

18. The polysaccharide used to solidify bacterial media is agar

19. During the decline phase of microbial growth, the rate of cell death exceeds the rate of cell division

20. Microorganisms undergo rapid cell division during the lag phase of their growth

Mat.

No:.....

Dept:.....

SECTION B. Answer all the questions in this section.

1. The ability of some microorganisms to tolerate exposure to high levels of sunlight is due to their ability to produce.....
2. The effects of environmental factors on bacterial growth and death rates usually results in the differences in the rates of
3. *Xeromyces* are bacterial species that are able to grow in solutions of concentrations.
4. An organism that is most likely to be found in deep thermal rift regions and ocean waters that are under high pressures is.....
5. Singlet oxygen, which can cause the death of bacteria usually occur following exposure to.....
6. The example of an acidophile that can grow only at pH values around 2 is.....
7. Most human pathogens as well as floral microorganisms grow best at temperatures.
8. Organisms with the ability to grow in environments of salt concentrations exceeding 15% NaCl are known as.....
9. Environments with high oxygen concentrations are usually toxic toorganisms.
10. The production of carotenoids by pigmented organisms could serve as a means of protection from.....

11. The rates of bacterial growth are influenced by all of the following environmental parameters **except** (a) Light radiation (b) Salinity (c) pH (d) Soil nutrients
12. Barophiles that can tolerate hydrostatic pressures greater than 200 atmospheres are regarded as.....
13. Each bacterial specie usually has a specific for specific environmental parameters.
14. bacteria are able to use light radiation of longer wavelengths.
15. The bacterial organisms most likely to be found growing inside refrigerators are regarded as.....
16. Microorganisms typically found in soil environments rich in sodium carbonate are known as.....
17. The shortest generation time usually corresponds to the.....
18. The temperature requirement of bacterial organisms depends on the specified by the genome of the organism.
19. The optimum growth temperature is that at which the..... occurs.
20. Microorganisms that are capable of both respiratory and fermentative metabolism are regarded asorganisms