

Microbe Mission Answer Key

1. (4pts)

- a) Tuberculosis
- b) Bacterium
- c) 180 minutes or 3 hours

2. (4pts)

- a) Scanning electron microscope
- b) Transmission electron microscope
- c) Compound light microscope
- d) The electron microscope has higher resolution and greater depth of field than the light microscope, etc.

3. (4pts)

- a) Scrapie, Cruetzfeldt Jackson's Disease, familial insomnia, (bovine) transmissible spongiform encephalopathies, and Kuru are acceptable.
- b) The brain (nervous system is acceptable)
- c) 9% (2pts)

4. (5pts)

- a) Right
- b) Left
- c) Left
- d) Right
- e) Techoic acid

5. (4pts)

- a) Lyme Disease
- b) Bacterium
- c) Answers ranging from 11 to 11.13 are acceptable (2pts)

6. (13pts)

- a) Light microscope
- b)
 - a. Body Tube
 - b. Revolving Nosepiece
 - c. Objectives
 - d. Stage Clips
 - e. Diaphragm
 - f. Light Source

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- g. Ocular Lens or Eyepiece
- h. Arm
- i. Stage
- j. Coarse Adjustment Knob
- k. Fine Adjustment Knob
- l. Base 33

7. (4pts)

- a) Ebola
- b) Viral; no vaccine
- c) 90 nm width and 990 nm length (2pts)

8. (4pts)

- a) Whooping cough or pertussis
- b) *Bordetella pertussis*
- c) Yes
- d) Antibiotics

9. (3pts)

- a) Tapeworm
- b) The intestines/ gastrointestinal tract
- c) Yes

10. (6pts)

- a)
 - A. Lag phase
 - B. Log phase or exponential phase
 - C. Stationary phase
 - D. Death phase
- b) 4096 (2pts)

11. (3pts)

- a) Bacteria
- b) 26 minutes (2pts)

12. (8pts)

- a)
 - A) Fungi
 - B) Bacteria
 - C) Prion

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D) Virus

b).

1. (smallest) C

2. D

3. A

4. B

13. (4pts)

a) Dutch Elm Disease

b) Fungal

c) Acceptable answers range from 14.86 to 15 minutes (2pts)

14. (6pts)

a)

a) Bacillus or rod

b) Spirillum or spiral

c) Coccus or sphere

b)

a) B

b) A

c) C

15. (4pts)

a) Malaria

b) Protozoan

c) 1,600,000 or 1.6×10^6 days (2pts)

16. (4pts)

a) Virus

b) Flavivirus

c) By mosquito

d) The Atlantic slave trade