Microbe Mission MIT Answer Key:

1. 200
2. 50
3. 10
4. 0.4
5. 5
6. 3.3 *10^6
7. 7*10^4
8. 2*10^-3
9. 1.337*10^4
10. 960 µm
11. 192 µm
12. Algae or Protist
13. C
14. A
15. D
16. A
17. B
18. D
19. C
20. B
21. B
22. A
23. A
24. D
25. C
26. Course Focus
27. Objective Lens
28. Contrast
29. Part 7
30. Part 3, 4, or 5
31. 72 Hours
32. 4000
33. 40-42 bac/hr
34. ~5000 bacteria
35. Lag
36. Stationary
37. Log
38. Stationary
39. Log
40. Death
41. Pink
42. Destaining with Alcohol
43. Outer Membrane
44. Cell Wall
45. Gram Negative
46. Myobacterium tuberculosis, Legionella pneumophila (2 points)
    1. Half Credit for disease names TB, Legionella
47. Water
48. Air
49. Gram positive
50. True
51. Aerobic
52. Artificial sweeteners, Animal Feed.
53. Fermentation
54. Lactic Acid
55. Pennicilium
56. CO_2
57. Curd
58. A
59. A
60. C
61. C
62. B
63. A
64. B/D
65. D
66. D
67. A
68. A
69. A
70. D
71. Adsorption/Attachment
72. Penetration
73. Replication (Biosynthesis)
74. Assembly (Maturation
75. Release (budding)
76. CD4+ T cells
77. Yes
78. Primates
79. Antibodies to HIV, Viral RNA detection, CD4 T cell Count (3 points)
80. Blood Transfusion
81. Surface Pili
82. Cytokine blockers

83. Kills Macrophages
84. Extracellular
85. Extracellular
86. Extracellular
87. Extracellular
88. Y
89. Y
90. N
91. Negative
92. Positive
93. Positive
94. Humoral
95. Cell mediated
96. Tuberculosis
97. No
98. BCG Vaccine, False Positive (2 points)
99. MRSA
100. Making sure the MRSA is not Antibiotic resistant to the antibiotics you prescribe (2 points)
101. Intracellular
102. Y
103. Y
104. Fast
105. Slow
106. F
107. F
108. T
109. T
110. F
111. T
112. F
113. T
114. T
115. T
116. Respiratory
117. Contact with Bird/Bat Droppings
118. Inhalation of Spores
119. Lung Biopsy
120. Antifungals
121. pathogen changes its (surface) proteins/ antigens either by gene switching or mutation to a form which can no longer be recognized by the immune system (2 points) (one for first and second part)
122. Pfemp genes/proteins can switch during the course of infection
123. Red Blood cells
124. Merozoite
125. IgA
126. Takes time to cross species barrier. The PrPSc appears to alter the protein structure of the native PrPc to produce more of the mutant PrPSc This slow "infectious" process takes many years for the alteration structure (replication). (3 points) (one first each part)
127. template-assisted replication
128. C
129. G
130. A

Five Tiebreakers Total (In order)
40, 57, 78, 125, 129

Total Points: 137