I

M. Phil./Ph. D. Entrance Examination- [redacted]
MICROBIOLOGY
Sub. Code: 58797

Day and Date: **Total Marks: 100**

Time:

ANSWER KEY

SECTION I

1. C) In silico
2. C) 1.33
3. B) Secondary treatment
4. C) Analyzing patterns of cleaved DNA fragments
5. B) *Tachypleus*
6. D) Real-time PCR screening for contaminant DNA
7. B) Neutralizes food preservatives and revives sub-lethally injured cells.
8. D) Carbolfuchsin
9. A) dead time
10. B) Internet blogs without citations
11. C) Using someone else's data or ideas without acknowledgment
12. B) Kirby-Bauer disk diffusion test
13. B) Denaturation, annealing, elongation
14. B) Identify research gaps
15. B) Median
16. D) Risk Group 3
17. B) non-polar; relatively polar
18. C) Gradient elution with gradually increasing salt concentration
19. A) Flame Ionization Detector (FID)
20. C) PubMed central
21. B) distantly
22. B) RasMol
23. C) tblastx
24. B) Solute-solute interactions
25. B) 5MPa

SECTION II

26. B) Cleavage of C3 into C3a and C3b by C3 Convertase
27. A) All Nucleated Cells and Antigen-Presenting Cells
28. A) Increased Susceptibility to Infections
29. B) Modifying the Environmental Conditions to Stimulate Microbial Growth
30. B) Intensely Transcribed Loops of Chromatin
31. B) The Bcl-2 Family
32. A) Regulate Cell Division and Ensure DNA Repair
33. B) Isoelectric Point (pI) in the First Dimension and Molecular Weight in the Second Dimension
34. B) Substrate Concentration at Which the Reaction Velocity Is Half of Vmax
35. B) Resonance Between the Carbonyl Carbon and the Amide Nitrogen
36. A) Ribose-5-Phosphate
37. B) Mutually Exclusive Events
38. C) Normal
39. B) Slope of the Line
40. B) Binding to Sialic Acid Receptors on Respiratory Epithelial Cells
41. B) Invasion of Deep Tissues and Organs in Immunocompromised Hosts
42. B) Lowering the pH of the Gut
43. C) Glucose Isomerase
44. B) Is a Non-Pathogenic Virus That Leads to Long-Term Gene Expression
45. C) Can Perform Mammalian-Like Post-Translational Modifications
46. C) Acts as an Allosteric Inhibitor for the First Committed-Step Enzyme
47. D) Ebola Virus
48. C) Peroxisomes
49. C) The Previous Exposure of the Soil to the Pesticide
50. C) Cannot Distinguish Between Live and Dead Cells, as rRNA Can Persist