

九十三學年度 生科院甲組、生科院(結構生物學程)甲組 碩士班入學考試

科目 微生物學 科號 0804、1103 共 1 頁第 1 頁 *請在試卷【答案卷】內作答

1. Acid-fast staining is an important procedure for differential staining of what kind of microorganisms? What are the diseases caused by this group of microorganisms? (5%)
2. What are the functional roles of bacterial fimbriae? (5%)
3. Describe the difference between butanediol fermentation and mixed acid fermentation. (5%)
4. When we say a virus is a "negative strand" RNA virus, what does it mean? Please give an example of negative strand RNA virus that infects humans. (5%)
5. Please distinguish acute, persistent, chronic, and latent viral infections. (5%)
6. Give an example of a virus that "associates" with animal tumors. With what kind of evidence can we say a virus "causes" the tumor? (5%)
7. What are the functions, chemical nature, origin, and working mechanism of human "defensins". (5%)
8. What are biofilms? Why are they medically important? (5%)
9. Influenza virus, particularly the H5N1 strains, is one of the most dangerous human pathogens. (1) What does "H5N1" stand for? (2) How do you know whether a patient is infected with influenza virus? (3) How do you know whether the virus is of the H5N1 type? (4) Please describe the general properties of influenza virus. (10%)
10. 說明: 每小題皆含兩個在微生物學領域具重要性的字辭。試以三句敘

述(注意:不足三句以及超過三句皆會降低得分)扼要說明 A 與 B 的關

係及此關係在微生物學理論或應用上的重要性。(50%)

1. DNA/mutation

2. FtsZ/cell division

3. bacteriocin/food safety

4. ribosomal RNA/phylogeny

5. plasmid/antibiotic

6. archaea/extremophile

7. yeast/eukaryote

8. quorum sensing/signal transduction

9. anthrax/bioterrorism

10. SARS/vaccine