

Major(전공):

ID(학번):

NAME(이름):

*Following question is 3 points unless the point is specified

- 1 How are viruses are similar to cellular organisms? How do they differ?

- 2 List some characteristics used in classifying viruese (at least 3 characterisitics)

- 3 How does a viroid differ from a virus?

- 4 What are prebiotics, probiotics and synbiotics?

- 5 What is indicator organism, and what properties should it have?

- 6 Why is the "meta effect" important for understanding biodegradation?

- 7 What are major types of milk fermentations? (list at least 3 types)

- 8 Describe the major approaches used in food preservation (5 points)

- 9 Explain five ways in which chemotherapeutic agents kill or damage bacterial pathogens (5 points)
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.

- 10 Briefly describe the five major ways in which bacteria become resistant to drugs (5 points)
- 1.
 - 2.
 - 3.
 - 4.
 - 5.
- 11 How does commensalism differ from cooperation?
- 12 How does cooperation differ from mutualism?
- 14 What is the function of leghemoglobin?
- 15 Why do you think that despite its great abundance, SAR11 was not discovered until the late 20th century?
- 16 Describe the buffering system that regulates the pH of seawater.
- 17 What are the important functions of microorganisms in ecosystems?
- 18 Describe the difference between assimilatory and dissimilatory sulfate reduction
- 19 Why do you think some bacteria can reduce Fe^{3+} only in acidic conditions?
- 20 Define mineralization and immobilization and give examples (4 points)
- 21 What C(carbon) form(s) will accumulate after anaerobic degradation of organic matter?

****Briefly define or describe following terms (2 points each)***

- 25 neuraminidase

- 26 piezotolerant bacteria

- 27 thermocline

- 28 photic zone

- 29 oligotrophic and eutrophic

- 30 rhizosphere and rhizoplane

- 31 GRAS

- 32 putrefaction

- 33 Ergotism

- 34 opportunistic microorganism

- 35 compromised host

- 36 lytic and lysogenic

- 37 prophage

- 38 symbiosis

- 39 Primary metabolite & secondary metabolite

- 40 cidal and static agents

- 41 PABA and sulfa drug

42 BOD, COD and TOC

43 Amensalism

44 MIC and MLC