

大葉大學 95 學年度轉學招生考試試題紙

系	組	別	日\ 第二部	年級	考試科目 (中文名稱)	考試日期	節次	共備註頁
生命科學系			日	三	普通微生物學	8月7日	13:30~ 14:50	P2-1

註：考生可否攜帶計算機或其他資料作答，請在備註欄註明（如未註明，一律不准攜帶）

單選題，共 20 題，每題 5 分。（請依題號於答案卡上畫記作答，答錯不倒扣）

- Antoni van Leeuwenhoek is known as the Father of
(A) Protozoology and Bacteriology. (B) Chemotherapy. (C) Biochemistry.
(D) Microbiology.
- Which of the following statements concerning Koch's postulates is false?
(A) Koch's postulates cannot be used to demonstrate the cause of all diseases.
(B) A suspected pathogen must be found in the majority of individuals with a particular disease. (C) A suspected pathogen must be able to grow in the laboratory. (D) All of Koch's postulates must be satisfied before an organism can be proven to cause a particular disease.
- All of the following are characteristics of viruses EXCEPT:
(A) they are composed of genetic material and protein. (B) they are obligatory parasites. (C) they are acellular. (D) they are visible with a light microscope.
- The first disease proven to be bacterial in origin was
(A) malaria (B) yellow fever (C) cholera (D) anthrax
- All of the following statements concerning prokaryotic flagella are true EXCEPT:
(A) A "run" results from counterclockwise movement of the flagellum.
(B) Prokaryotic flagella are anchored to the cell wall by means of the basal body.
(C) *Treponema* is an example of a bacterium that has an endoflagellum.
(D) Prokaryotic flagella are composed of tubulin.
- Peptidoglycan is
(A) a complex polysaccharide. (B) present in all prokaryotic cells. (C) composed of NAG, NAM, and LPS. (D) Both B and C are correct.
- All of the following are true statements concerning the endosymbiotic theory EXCEPT:
(A) The endosymbiotic theory is not universally accepted. (B) Mitochondria and chloroplasts have their own DNA and ribosomes. (C) Mitochondria and chloroplasts can divide independently of the cell. (D) Eukaryotes were formed from the phagocytosis of small anaerobic cells by larger aerobic cells.
- The purpose of restriction enzymes in bacteria is
(A) to make conjugation more efficient. (B) to provide the cell with new phenotypes, such as antibiotic resistance. (C) to protect the cell from invading phages. (D) to allow cells to accept foreign DNA.
- The term "sterilization" applies to the removal of all of the following EXCEPT:
(A) viruses. (B) fungi. (C) bacterial endospores. (D) prions.

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生命	生物	科技	日	三	普通微生物學	8月7日	13:30~ 14:50	P2-2

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10. Put the following in order, from *most resistant to antimicrobial agents* to *least resistant to antimicrobial agents*: I. protozoa II. Bacterial endospores III. enveloped viruses IV. nonenvelopes viruses V. protozoan cysts
(A) V,III,IV,II,I (B) I,III,IV,V,II (C) II,V,I,IV,III (D) II,IV,III,I,V
11. The spores of which of the following microbes are the most resistant to every known sterilization technique?
(A) *Pseudomonas aeruginosa* (B) *Clostridium botulinum* (C) *Neisseria gonorrhoeae* (D) *Bacillus stearothermophilus*
12. Which of the following is the ultimate means of sterilization?
(A) incineration (B) autoclaving (C) radiation (D) desiccation
13. More than half of all antibiotics and semisynthetic drugs come from which of the following genera?
(A) *Penicillium* (B) *Cephalosporium* (C) *Mycobacterium* (D) *Streptomyces*
14. All of the following distinguish the archaea from the bacteria EXCEPT:
(A) cell membrane composition. (B) mechanisms of reproduction. (C) cell wall composition. (D) the amino acid used to start polypeptide chains.
15. All of the following statements concerning viruses are true EXCEPT:
(A) Viruses enter a cell to complete the replication they have begun extracellularly.
(B) Tobacco mosaic virus was the first to be discovered and characterized.
(C) Viral capsids can assume one of three basic shapes. (D) Some viruses have an outer membrane called an envelope.
16. A virus usually infects only certain types of cells due to
(A) particular genes that it shares with the infected cell. (B) differences in size between the virus and the host cell. (C) interactions between viral and cellular surface molecules. (D) the speed with which it can enter these cells.
17. Why is lysogeny advantageous to a bacteriophage?
(A) It speeds up the viral life cycle. (B) It enables the bacteriophage to take over the cell. (C) It allows the bacteriophage to destroy the host cell's DNA. (D) The genetic material of the phage can be inherited by future generations of cells.
18. All of the following are antiphagocytic factors produced by pathogens EXCEPT:
(A) leukocidins. (B) capsules. (C) cytotoxins. (D) M protein.
19. Which of the following is a major source of disease transmission in the world?
(A) food-borne transmission (B) fecal-oral infection (C) bodily fluid transmission
(D) water-borne transmission
20. Which of the following does not contribute to the virulence of a pathogen?
(A) extracellular enzymes (B) presence of pathogen in an animal host (C) a capsule
(D) toxins