

銘傳大學九十二學年度轉學生招生考試

七月二十五日 第三節

普通生物學 試題

普通生物學試是(每題四分、共二十五題;答題超過五題，每多一題倒扣二分)

1. Which group includes the simples of organisms that lack nuclei?
a. Bacteria b. Protista c. Fungi d. Plants
2. What structures are found within bacterial cells?
a. Ribosomes b. Chloroplasts c. Nucleus d. Mitochondria
3. Two organelles which are believed to have once been free-living bacterial cells are _____ and _____.
a. ribsomes; nucleolus b. Golgi compls; endoplasmic reticulum
c. peroxisomes; lysosomes d. chloroplasts;mitochondria
4. When a cytoplasmic vesicle fuses with the plasma membrane, expelling its contents outside the cell, the process is known as:
a. active transport b. exocytosis c. phagocytosis d.endocytosis
5. The overall purpose of the Calvin cycle in photosynthesis is to:
a. generate molecules of ATP b. generate NADP c. give off oxygen for animal use
d. build organic(carbon) molecules
6. Bacterial cells divide by:
a. Mitosis b. Cleavage c. Cytokinesis d. binary fission
7. During which phase of the cell cycle is DNA synthesized?
a. G1 b. G2 c. S d. Prophase
8. The proper sequence, beginning to end, for the stages of mitosis is:
a. prophase-metaphase-anaphase-telophase
b. telpohase-anaphase-metaphase-prophase
c. anaphase-prophase-metaphase-telophase
d. prophase-anaphase-metaphase-telophase
9. When does separation of homologous chromosomes occur?
a. prophase I
b. anaphase I
c. interphase
d. anaphase II
10. The process of bringing in the appropriate amino acid into position along the mRNA in the cytoplasm is:

- a. Translation
 - b. Transcription
 - c. Transduction
 - d. Promotion
11. The site where RNA polymerase attaches to the DNA molecule to start the formation of mRNA is called a(n):
- a. operon
 - b. exon
 - c. promoter
 - d. operator
12. Trimming certain genes out of molecules of DNA requires the use of special:
- a. digestive enzymes
 - b. restriction enzymes
 - c. enzymes from peroxisomes
 - d. microscopic scalpels
13. All of the genes and other DNA of an organism constitute its:
- a. genome
 - b. introns
 - c. multigene family
 - d. None of these is correct
14. How many genes constitute the human genome?
- a. more than 1 million
 - b. 500,000
 - c. about 35,000
 - d. 46
15. _____ consist of a nucleic acid core surrounded by a protein coat.
- a. Viruses
 - b. Protists
 - c. Eubacteria
 - d. Archaeobacteria
16. The _____ system of human body is responsible for secreting the hormones that help integrate the body's activities.
- a. integumentary
 - b. nervous
 - c. circulatory
 - d. endocrine
17. The organ system of the human body that removes metabolic wastes from the bloodstream is the _____.

- a. digestive
 - b. urinary
 - c. lymphatic
 - d. respiratory
18. How do veins prevent the backflow of blood within them?
- a. by having thick, muscular walls
 - b. because of the tiny lumen inside them
 - c. they are capable of contracting
 - d. they possess flaplike valves
19. Animals that consume both plant material and other animals are called:
- a. Herbivores
 - b. Carnivores
 - c. Omnivores
 - d. Detritivores
20. The first site of protein digestion in the digestive system is:
- a. in the small intestines
 - b. in the stomach
 - c. the mouth
 - d. the esophagus
21. _____ secrete antibodies
- a. B cells
 - b. T cells
 - c. Helper T cells
 - d. Natural killer cells
22. Allergic reactions are triggered by the release of _____ from certain cells.
- a. epinephrine
 - b. histamine
 - c. serotonin
 - d. acetylcholine
23. The receptor for steroid hormones lines:
- a. in the cytoplasm
 - b. within the cell membrane
 - c. in the glycocalyx of the cell membrane
 - d. in the endoplasmic reticulum of the cell
24. Cells that insulate and speed impulse conduction down neurons in the PNS are:
- a. nodes of Ranvier
 - b. astrocytes
 - c. Schwann cells

- d. oligodendrocytes
25. Choose the best definition of the term “ecology”.
- a. Ecology is the study of animals in their habitat
 - b. Ecology is the study of plants and animals in their ecosystems.
 - c. Ecology is the study of communities of organisms.
 - d. Ecology is the study of interactions of organisms with each other and with their habitat.

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