参考样题

9. All the molecules below, except one, are involved in either the Krebs Cycle or the Electron Transport Chain in aerobic respiration. Which is the odd one out?

   A. NADH
   B. $FADH_2$
   C. NADPH
   D. ATP synthase
   E. Cytochrome oxidase

10. Which of the following combinations of statements is correct?

   1. Most cells are capable of phagocytosis.
   2. Phagocytosis involves uptake of larger particles than pinocytosis.
   3. In any given time period the volume of endocytosed matter is about twice that of exocytosed matter.
   4. Pinocytosis uptakes molecules selectively according to the needs of the cell.
   5. Receptor-mediated endocytosis can be an entry point for viruses.

   A. 1 and 4
   B. 2 and 5
   C. 1, 3 and 5
   D. 2, 3 and 4,
   E. all of them

Answer: 9. C 10. B

93. Various terms are used to describe areas or regions where organisms are found. Which of the following lists shows these regions in order of decreasing size?

   A. territory – ecosystem – biosphere – habitat
   B. biosphere – ecosystem – habitat – territory
   C. territory – habitat – ecosystem – biosphere
   D. habitat – territory – ecosystem – biosphere
   E. biosphere – territory - habitat – ecosystem

94. Which of the following would you expect to be absent, or very rare, on acid soils, deficient in calcium?

   A. protozoans
   B. snails
   C. insects
   D. calcifuge plants
   E. mosses

Answer: 93. B 94. B

1. All of the following are factors influencing membrane fluidity except which one?

   A. Number of double bonds in the lipids
   B. Temperature
   C. Flip-flop movement of lipids
   D. Cholesterol
   E. Proteins

Answer: C

考试大纲

20% Cell Biology
Microbiology
Biotechnology
Structure and function of cells:
- chemical components
- organelles
- cell metabolism
- protein synthesis
- transport through membranes
- mitosis and meiosis

25% Animal Anatomy & Physiology (emphasis on vertebrates)
Structure and function of tissues and organs involved in:
- digestion and nutrition
- circulation
- reproduction and development
- regulation (neural and hormonal)
- respiration
- excretion
- immunity

15% Plant Anatomy & Physiology (emphasis on seed plants)
Structure and function of tissues and organs involved in:
- photosynthesis, transpiration and gas exchange
- transport of water, minerals and assimilates Mendelian inheritance
- multiple allelism, recombination, sex linkage
- growth and development
- reproduction (ferns and mosses included)

5% Ethology
Behavioural systems
Conflict behaviour
Causes of behaviour
Learned behavior

10% Ecology
Ecosystems
Bio-geochemical cycles
Population structure and dynamics
Biosphere and man
Food relationships
Energy flow
Succession

5% Biosystematics
Structure and function
Evolutionary and ecological relationships among typical organisms in major groups (Phyla and Classes only)

20% Genetics & Evolution
Variation: mutation and modification
Hardy-Weinberg principle
Mechanism of evolution

参考书目

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Understanding Biology for Advanced Level
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Publisher: Nelson Thornes
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Biological Science 1 and 2: v. 1&2 by Taylor, D. J., Green, N. P. O., Stout, G. W. 3rd (third) Edition (1997)

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