

**I. Choose the only correct answer of the multiple choice questions.**

1. Meiosis is the mechanism by which ploidy
  - A. is reduced from diploid to haploid
  - B. is duplicated
  - C. remains the same
  - D. can be changed from triploid to tetraploid
  - E. can be multiplied
  
2. Which of the following statements about the electron transport chain is true?
  - A. Electrons are received from NADH and FADH<sub>2</sub>.
  - B. Electrons are passed from donor to recipient carrier molecules in series of oxidation-reduction reactions.
  - C. Usually the terminal electron acceptor is oxygen.
  - D. Most of the enzymes are part of the inner mitochondrial membrane.
  - E. All of the above.
  
3. Which is the first structure stimulated in a reflex arc?
  - A. effector
  - B. motor neuron
  - C. receptor
  - D. intermediate neuron
  - E. primary nephron
  
4. Which one represents the largest portion of the human cerebral cortex?
  - A. Primary somatosensory cortex
  - B. Frontal cortex
  - C. Primary motor cortex
  - D. Hypothalamus
  - E. Thalamus
  
5. In the kidneys of mammals, loop of Henle can be found in...
  - A. medulla
  - B. cortex
  - C. pelvis
  - D. calyx
  - E. none of that
  
6. An allele is
  - A. a truncated form of a particular gene.
  - B. the more frequent form of the DNA sequence of a particular gene.
  - C. the less frequent form of the DNA sequence of a particular gene.
  - D. a never expressed (silent) DNA sequence, which is a dysfunctional homologue of a known gene.
  - E. one of two or more forms of the DNA sequence of a particular gene.

7. The presence of an enzyme affects the
  - A. amount of activation energy required
  - B. overall energy change, or  $\Delta G$ .
  - C. energy of the reactants.
  - D. energy of the products.
  - E. free energy of the transition state.
  
8. What is the anticodon?
  - A. a part of a double stranded DNA
  - B. a part of a single stranded DNA
  - C. a part of a mRNA
  - D. a part of a tRNA
  - E. a part of a rRNA
  
9. Which one of the followings can occur in the nucleus?
  - A. Fatty acid synthesis
  - B. Protein synthesis
  - C. Starch synthesis
  - D. RNA synthesis
  - E. Cellulose synthesis
  
10. Which organelles contain genetic material?
  - A. mitochondria
  - B. nucleus
  - C. chloroplast
  - D. B and C
  - E. A, B and C

**II. Give the definitions.**

Mendels's first law:.....

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Transcription: .....

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