

## **SELF-TEST CORNER OF MOLBIOL** **UNDERGRADUATE:** **DESIGNING OWN TESTS Part 2. Xenia Kim**

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Submitted by Xenia Kim  
13-10 Biotechnology

February 1, 2015 (Sunday!)

### GENETIC ROLE OF NUCLEIC ACIDS

1. What is deoxyribonucleoside?
  - a) RNA monomer
  - b) The complex of phosphate, a nitrogenous base and deoxyribose
  - c) Purine or pyrimidine bound to deoxyribose
  - d) The simplest unit of heredity
  - e) DNA monomer
  
2. Which components of a nucleotide are bound to each other by N-glycosidic bond?
  - a) Pentose and nitrogenous base
  - b) Phosphate and deoxyribose
  - c) Ribose and deoxyribose
  - d) Adenine and Thymine
  - e) 2 complementary nitrogenous bases
  
3. What nitrogenous base is also known as 6-aminopurine?

- a) Uracil
- b) Guanine
- c) Cytosine
- d) Adenine
- e) Thymine

4. According to Chargaff rules, in DNA:

- a)  $A=U$
- b)  $C=50\%$
- c)  $C=G$
- d) The secondary structure is double helix
- e)  $A+T=G+C$

5. Which of the following compounds is not present in RNA?

- a) Ribose
- b) Phosphate group
- c) Major purines
- d) Uracil
- e) Thymine

6. What is the distance between two neighbouring nitrogenous bases?

- a) 0.34 nm
- b) 3.4 nm
- c) 2 nm
- d) 0.36 nm
- e) 0.6 nm

7. When did J. Watson and F. Crick discover the double helix?
- a) 1962
  - b) 1953
  - c) 1968
  - d) 1956
  - e) 1965
8. Uracil is:
- a) Purine
  - b) Minor nitrogenous base
  - c) Nucleoside
  - d) Thymine isomer
  - e) Pyrimidine
9. The net charge of DNA molecule is:
- a) Positive
  - b) Equal to zero
  - c) Determined by the charge of nitrogenous bases
  - d) Negative
  - e) Impossible to calculate
10. What are the similarities between DNA and RNA?
- a) The monomers are nucleosides, carry genetic information
  - b) Both contain the ribose, responsible for translation
  - c) The monomers are nucleotides including the pentose

- d) Single-stranded molecules taking part in gene expression
- e) Synthesized on the same template, contain nitrogenous bases

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