

## **SELF-TEST CORNER OF MOLBIOL**

### **UNDERGRADUATE: DESIGNING OWN TESTS Part 1.**

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#### DNA AND RNA STRUCTURE AND PROPERTIES

1. What is the difference between nucleotide and nucleoside?
  - a) Nucleotide doesn't have a phosphate group
  - b) Nucleoside has a phosphate group
  - c) They have the same structure but different names
  - d) Nucleoside is composed of sugar and nitrogen base**
  - e) Nucleoside doesn't have sugar
2. Which position of the deoxyribose is lacking hydroxyl group?
  - a) 1'
  - b) 2'**
  - c) 3'
  - d) 4'
  - e) 5'
3. The bond between sugar and nitrogen base:
  - a) N-glycosidic**
  - b) O-glycosidic
  - c) Hydrogen bond
  - d) Peptide bond
  - e) Phosphodiester bond
4. The conformations of DNA depend on (more than 1 correct answer):
  - a) Pressure
  - b) Temperature
  - c) pH
  - d) Humidity**
  - e) Presence of ions**
5. Plasmid is...
  - a) Circular shaped human DNA
  - b) Circular shaped bacterial DNA**

- c) Circular shaped bacterial RNA
  - d) Circular shaped human RNA
  - e) None of these
6. Chose the right properties of RNA:
- a) Single stranded, has thymine instead of uracil, has secondary and tertiary structures
  - b) Double stranded, has uracil instead of thymine, has secondary and tertiary structures
  - c) Single stranded, has uracil instead of thymine, doesn't have secondary and tertiary structures
  - d) Single stranded, has thymine instead of uracil, has secondary and tertiary structures
  - e) Single stranded, has uracil instead of thymine, has secondary and tertiary structures
7. RNA sometimes can act as:
- a) Enzyme
  - b) phage
  - c) Polysaccharide
  - d) Fatty acid
  - e) Neuromediator
8. Ribozyme is a:
- a) Proteolytic enzyme
  - b) Isomerase
  - c) Enzyme of RNA nature
  - d) Peptidase
  - e) Enzyme of protein nature
9. "Clover leaf" is a secondary structure of:
- a) mRNA
  - b) miRNA
  - c) tRNA
  - d) rRNA
  - e) all of the above
10. The secondary structure of RNA is stabilized by:
- a) Hydrogen bonds
  - b) Ion bonds
  - c) N-glycosidic bonds
  - d) O-glycosidic bonds
  - e) Phosphodiester bonds

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