

10. The compound that consists of ribose linked by an N-glycosidic bond to N-9 of adenine is:

- a. a deoxyribonucleoside
- b. a purine nucleotide
- c. a pyrimidine nucleotide.
- d. adenosine monophosphate
- e. adenosine

11. The double helix of DNA in the B-form is stabilized by:

- a. covalent bonds between the 3' end of one strand and the 5' end of the other
- b. hydrogen bonding between the phosphate groups of two side-by-side strands
- c. hydrogen bonds between the riboses of each strand
- d. nonspecific base-stacking interaction between two adjacent bases in the same strand
- e. ribose interactions with the planar base pairs.

12. Double stranded regions of RNA typically take on a(n):

- a. A-form left-handed helix
- b. A-form right-handed helix
- c. B-form left-handed helix
- d. B-form right-handed helix
- e. Z-form left-handed helix

13. If one strand of a DNA molecule has the base sequence 5'-ATTGCAT-3', its complementary strand will have the sequence

- a. TAACGTA
- b. ATGCAAT
- c. GCCATGC
- d. CGGTACG
- e. ATAGGCC

14. When DNA is heated (~95°C), which change does not occur?

- a. UV light absorption increases
- b. The glycoside bonds break
- c. The helix un-winds
- d. The H-bonds between bases break
- e. The viscosity of the solution decreases

15. In DNA sequencing by the classical Sanger method,

- a. radioactive dideoxy-ATP is included in the four reaction mixtures before addition of DNA polymerase
- b. specific enzymes are used to cut the product into small pieces separated by electrophoresis
- c. dideoxynucleotides are present at high levels to get the complementary strand form
- d. the role of dideoxy-CTP is to only occasionally terminate formation of the complementary strand
- e. the template strand is radioactive so that it can cleave the product into small pieces