

- ___ 11. The direction for synthesis of DNA is
- a. $5' \rightarrow 3'$.
 - b. $3' \rightarrow 5'$.
 - c. $5' \rightarrow 5'$.
 - d. $3' \rightarrow 3'$.
 - e. variable.
- ___ 12. The genetic code is carried in the
- a. DNA backbone.
 - b. sequence of bases.
 - c. arrangement of 5', 3' phosphodiester bonds.
 - d. Okazaki fragments.
 - e. histones.
- ___ 13. The double helix structure of DNA was suggested as a result of X-ray diffraction data collected by
- a. Hershey and Chase.
 - b. Griffith.
 - c. Avery, MacLeod, and McCarty.
 - d. Watson and Crick.
 - e. Franklin and Wilkens.
- ___ 14. In one molecule of DNA one would expect the composition of the two strands to be
- a. both either old or new.
 - b. both all new.
 - c. both partly new fragments and partly old parental fragments.
 - d. one old, one new.
 - e. unpredictable.
- ___ 15. Chargaff's rules state or infer that
- a. $[A] = [T]$.
 - b. $[G] = [C]$.
 - c. ratio of purines to pyrimidines = 1.
 - d. ratio of T to A = 1.
 - e. ratio of G to C = 1.
- ___ 16. Deoxyribose and phosphate are joined in the DNA backbone by
- a. one of four bases.
 - b. purines.
 - c. pyrimidines.
 - d. phosphodiester bonds.
 - e. the 1' carbon of the sugar.
- ___ 17. The investigators credited with elucidating the structure of DNA are
- a. Hershey and Chase.
 - b. Messelson and Stahl.
 - c. Avery, MacLeod, and McCarty.
 - d. Watson and Crick.
 - e. Franklin and Wilkens.