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