



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



## WORK SHEET – 32

Class: XII

Sub: Biological Science

Date: 25.07.2020

Topic: Ch 6 : Molecular Basis of Inheritance (Part I) – Structure of DNA

F.M. : 15

Choose the correct option:

(1x15=15)

1. Bacterial chromosome is associated with :-  
a) Histone b) RNA c) Polyamines d) Both (b) and (c)

**Answer : Both (b) and (c) (d)**

2. Histone proteins are \_\_\_\_\_ type of proteins.  
a) Acidic b) basic c) Neutral d) Sulphur Containing

**Answer : Basic (b)**

3. The following is not a pyrimidine :-  
a) Cytosine b) Guanine c) Thymine d) Uracil

**Answer : Guanine (b)**

4. Purines have a \_\_\_\_\_ membered ring structure.  
a) 7 b) 9 c) 6 d) 5

**Answer : 9 (b)**

5. In a nucleotide the pentose sugar and base are joined by \_\_\_\_\_ bond.  
a) N-glycosidic b) Peptide c) Diester d) None of these

**Answer : N-glycosidic (a)**

6. According to Chargaff's rule the following formula is correct :-  
a)  $A+G = T+C$  b)  $A/G = T/C$  c)  $A+C+G=T$  d) All of these

**Answer :  $A+G = T+C$  (a)**

7. In a polynucleotide chain, the deoxyribose molecules of two adjacent nucleotides linked by :-  
a) Glycosidic bond b) Hydrogen bond c) Phosphodiester bond d) Peptide bond

**Answer : Phosphodiester bond (c)**

8. The diameter of DNA Helix as per the Watson and Crick Model is :-  
a) 2nm b) 20 nm c) 200 nm d) None of these

**Answer : 2nm (a)**

9. The number of hydrogen bonds between guanine and cytosine are :-  
a) One b) Three c) Two d) Four

**Answer : Three (b)**

10. In a complete spiral turn of B-type DNA there are \_\_\_\_\_ nucleotides.

- a) 12 b) 11 c) 10 d) 9

**Answer : 10 (c)**

11. In case of RNA adenine always pairs with \_\_\_\_\_ .

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

**Answer : Uracil (a)**

12. Complementary base pairing means :-

- a) A pairs with T and vice versa b) G pairs with T and vice versa c) A pair with T and G pairs with C and vice versa d) C pairs with U

**Answer : A pair with T and G pairs with C and vice versa (c)**

13. The two polynucleotide chains run parallel to each other in opposite and thus said to be :-

- a) Parallel b) antiparallel c) Polar d) All of these

**Answer : Antiparallel (b)**

14. Watson and Crick double helix model was based on :-

- a) Chargaff's rule b) X-ray diffraction c) Phosphorescence d) Both (a) and (b)

**Answer : Both (a) and (b) (d)**

15. A tri nucleotide consists of \_\_\_\_\_ nucleotide.

- a) 3 b) 2 c) 4 d) 5

**Answer : 3 (a)**

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