



# ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

## SOLUTIONS – 14

Class: XII

Sub: Biological Science

Date: 15.06.2020

Topic: Mendelian Inheritance (Part B)

Non-mendelism (Part A) – Incomplete Dominance Co-dominance

F.M. : 15

Choose the correct option:

(1x15=15)

1. Law of dominance is violated by the phenomenon of :-  
a) Incomplete dominance b) Co-dominance c) Epistasis d) All of these  
**Answer : All of these (d)**
2. The phenomenon of Linkage violates :-  
a) Law of Dominance b) Law of Segregation c) Law of Independent Assortment  
d) Both (b) and (c)  
**Answer : Both (b) and (c) (d)**
3. Limitations of the law of Segregation :-  
a) Applies to diploid only b) Not applicable on pleiotropic genes c) Not applicable on epistatic genes  
d) All of these  
**Answer : All of these (d)**
4. The phenomenon where one gene does not completely masks the effect of its recessive gene called :-  
a) Incomplete Dominance b) Dominance c) Epistasis d) Co-dominance  
**Answer : Incomplete Dominance (a)**
5. The phenotype of  $F_1$  generation in incomplete dominance is the :-  
a) Phenotype of dominant allele b) Intermediate phenotype of both alleles c) Phenotype of recessive allele d) All of the above  
**Answer : Intermediate Phenotype of both alleles (b)**
6. The phenotypic ratio in incomplete dominance in  $F_2$  generation is :-  
a) 3:1 b) 2:1:1 c) 1:2:1 d) 2:3  
**Answer : 1:2:1 (c)**
7. Incomplete dominance is seen in :-  
a) *Mirabilis jalapa* b) Andalusian fowl c) *Antirrhinum* d) All of these  
**Answer : All of these (d)**

8. A cross is made between a homozygous red snapdragon flowers (RR) and a white snapdragon (rr) flower. What would be the colour of the progeny in  $F_1$  generation?  
a) All red b) 50 % red and 50 % white c) All pink d) All white  
**Answer : All pink (c)**
9. The phenomenon where both allelic genes are equally and independently expressed in an organism :-  
a) Co-dominance b) Blending inheritance c) Epistasis d) Pleiotophy  
**Answer : Co-dominance (a)**
10. Co-dominance is observed in :-  
a) Coat colour of mice b) Coat colour of cattle c) Snapdragon d) All of these  
**Answer : Coat colour of cattle (b)**
11. If a black coat male cattle is crossed with a white coat female cattle. What is the phenotype of  $F_1$  generation?  
a) All black b) Grey c) White d) Roan coat colour  
**Answer : Roan coat colour (d)**
12. The co-dominant gene pair of Human ABO blood group system is :-  
a)  $I^A I$  b)  $I^A I^B$  c)  $I^B I$  d) None of these  
**Answer :  $I^A I^B$  (b)**
13. What would be the genotype of a person with AB blood group ?  
a)  $I^A i$  b)  $I^A I^A$  c)  $I^A I^B$  d)  $I^B i$   
**Answer :  $I^A I^B$  (c)**
14. Characteristic of ABO blood group is :-  
a) Presence of 3 alleles b)  $I^A$  and  $I^B$  are co-dominant c) i is recessive to  $I^A$  and  $I^B$  d) All of these  
**Answer : All of these (d)**
15. The glycoprotein present on RBC membrane of a person with AB blood group is :-  
a) Glycoproteins A and B b) Glycoproteins A c) Glycoprotein B d) None of these  
**Answer : Glycoproteins A and B (a)**

