Discipline: anthropology essay sample

Science, Genetics

Part B.

1`. If two flowers, a white and a red flower produce a pink offspring, this is known as co-dominance.

2. If two peas, a yellow one and a green one produce green offspring only then the green color is dominance.

3. The yellow color is recessive.

4. If one trait in a given cross does not mask the other and both the two traits are displayed the condition is called incomplete dominance.

5. Genetic trait of Thumb H, h.

The probability of Hitchhike phenotype is ¾ while that of nonhitch phenotype is 1/4

6. Two different individual one of tongue roller while the other one is no roller.

Let the mother be roller hence the genotypes are Tt while the father be a non-roller tt.

Offsprings' genotype Tt, Tt, tt, tt. Roller offsprings are Tt, Tt, while non-rollers are tt and tt

The probability of roller is ½ while the probability of non-roller is ½.

7. For a person with genotype AB for blood group ABO, the blood type of the person is AB

For phenotype O, the genotype is O

8. (a) A

(b)AO

9. (a) Red color R incomplete dominance over the white color r

The genotypes will be four Rr for the F1 generation.

(b) The phenotype for F1 generation will be pink flower.

10. Yes the genetic can provide clear evidence solve the case. This is because color blindness is a sex linked trait therefore the genotype of the man and the woman combined to produce the offspring daughter. If the woman has recessive gene for color blindness, then she is to be accused.

Phenotype Tall smooth Tall short

Genotype TtSsTTss

Offspring TTSs, TTSs, TTss, TTss, TtSs, TtSs, Ttss, Ttss

The phenotypic ratio is 4 tall smooth: 4 tall wrinkled.

The genotypic ratio is 2TTSs: 2TTss: 2TtSs: 2Ttss