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ANSWER SCHEME

Genetics

Section A

- 1. B
- 2. A
- 3. C
- 4. A
- 5. B
- 6. A
- 7. B
- 8. B
- 9. A
- 10.A

Section B

- 11.Mutation
- 12.Albinism
- 13.Gene
- 14.Genotype
- 15.Down's syndrome

Section C

16. Variations are observable differences among living organisms of the same species. There are two types of variation, namely continuous and discontinuous variation. Continuous variation is a type of variation where a characteristic has many intermediate forms between two extremes e.g. height. Discontinuous variation on the other hand is a type of variation where individuals of the same species show clear cut differences among themselves e.g. blood group.

black Parent phenotype: brown X b b Parent genotype: BBX **(B**) B) **b**) (**b**) X

Gametes:

Fusion:

F₁ Genotype: Bb Bb Bb Bb

F₁ Phenotype: **Brown Brown Brown Brown**

Phenotypic ratio: 4brown:0 black

 $P(Black) = \frac{0}{4} \times 100\%$ P(Black) = 0%

18.BB and bb 19.Co-dominance 20.Haemophilia



A top student's secret tool