

# EDUCOM ACADEMY

## Heredity & Evolution (Chapter-9)

### C.B.S.E (Class-10)

Q1. Explain the terms:-

(i) Speciation (ii) Natural selection

Q2. Explain how equal genetic contribution of male and female parents is ensured in the progeny.

Q3. Explain Mendel's law of independent inheritance. Give one example.

Q4. Distinguish between homologous organs and analogous organs. In which category would you place wings of a bird and wings of a bat? Justify your answer giving a suitable reason.

Q5. Define the term 'evolution'. "Evolution cannot be equated with progress". Justify this statement.

Q6. A blue colour flower plant denoted by BB is crossbred with that of white colour flower plant denoted by bb.

(a) State the colour of flower you would expect in their F1 generation plants.

(b) What must be the percentage of white flower plants in F2 generation if flowers of F1 plants are self-pollinated?

(c) State the expected ratio of the genotypes BB and Bb in the F2 progeny.

Q7. Tabulate two distinguishing features between acquired traits and inherited traits with one example of each.

Q8. "The sex of a newborn child is a matter of chance and none of the parents may be considered responsible for it." Justify this statement with the help of flow chart showing determination of sex of a newborn.

Q9. Give the respective scientific terms used for studying:-

- (i) The mechanism by which variations are created and inherited
- (ii) The development of new type of organisms from the existing ones.

Q10. A cross was made between pure breeding pea plants one with round and green seeds and the other with wrinkled and yellow seeds.

- (a) Write the phenotype of F1 progeny. Give reason for your answer.
- (b) Write the different types of F2 progeny obtained along with their ratio when F1 progeny was selfed.

Q11. "We cannot pass on to our progeny the experiences and qualifications earned during our life time". Justify the statement giving reason and examples.

Q12. How many pairs of chromosomes are present in human beings? Out of these how many are sex chromosomes? How many types of sex chromosomes are found in human beings? "The sex of a newborn child is a matter of chance and none of the parents may be considered responsible for it". Draw a flow chart showing determination of sex of a newborn to justify this statement.



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