

Biology

XII

Principles of Inheritance and variation

I Answer the following in one word or sentence.

1. How many different kinds of gametes are formed from following genotypes?

- a) $AaBb$ b) $AABB$ c) $AABbCc$
d) $AADdEe$ e) $FFIIJj$ f) $AaBbCc$

2. A cross made between Individual and its recessive parent is called _____

3. Who discovered Incomplete dominance?

4. Which Mendel's Law is called Universal?

5. Name the stage of cell division where segregation of an independent pair of chromosomes occurs.

II Answer the following in 30-40 words.

1. A ~~wa~~ teacher wants his/her students to find the Genotype of Pea plants bearing purple coloured flower in their school garden. Name the cross and explain it how it will be obtained.
2. In snapdragon a cross between true breeding red flowered (RR) plants and true breeding white flowered (rr) plants shows a progeny of plants all with pink flowers. Make the cross and name the phenomenon.

3. Explain Pleiotropy with example.
4. What is Multiple allele and give its example.
5. If the Blood of Father is A (Homozygous) and mother is B (Homozygous) Explain the pattern of Inheritance exhibited.
6. Explain a Monohybrid cross. taking seed coat colour as a trait in *Pisum sativum*. work out the cross upto F_2 generation.
7. When a Tall pea plant was selfed it produced one fourth of its progeny as dwarf. Explain with the help of a cross.

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