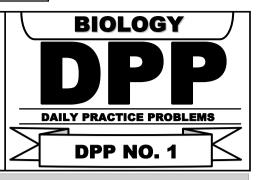


TARGET: NEET (UG) 2024

Course: SARANSH (Youtube Live CRASH COURSE)



## **BOTANY: PRINCIPLE OF INHERITANCE AND VARIATIONS**

**DPP No.: 1** 

1. Which Mendelian idea is depicted by a cross in which the F<sub>1</sub> generation resembles both the parents

(1) law of dominance

(2) inheritance of one gene

(3) co - dominance

(4) incomplete dominance

**2.** Alleles are :

(1) true breeding homozygotes

(2) different molecular forms of a gene

(3) heterozygotes

(4) different phenotype

3. In his classic experiments on pea plants, Mendel did not use

(1) Pod length

(2) Seed shape

(3) Flower position

(4) Seed colour

- 4. In a testcross involving F<sub>1</sub> dihybrid flies, more parental-type offspring were produced than the recombinant-type offspring. This indicates:
  - (1) Both of the characters are controlled by more than one gene.
  - (2) The two genes are located on two different chromosomes.
  - (3) Chromosomes failed to separate during meiosis.
  - (4) The two genes are linked and present on the same chromosome.
- **5.** Which one from those given below is the periods for Mendel's hybridization expermients?

(1) 1856 - 1863

(2) 1840 - 1850

(3) 1857 - 1869

(4) 1870 - 1877

**6.** The genotypes of a Husband and Wife are IAIB and IAi

Among the blood types of their children how amny different genotypes and phenotypes are possible

(1) 3 genotypes; 3 phenotypes

(2) 3 genotypes; 4 phenotypes

(3) 4 genotypes; 3 Phenotyeps

(4) 4 genotypes; 4 phenotypes

- 7. Which of the following characteristics represent 'Inheritance of blood groups' in humans?
  - a. Dominance

b. Co-dominance

c. Multiple allele

d. Incomplete dominance

- e. Polygenic inheritance
- (1) b, c and e

(2) a, c and e

(3) b, d and e

- (4) a, b and c
- 8. In Antirrhinum (Snapdragon), a red flower was crossed with a-white flower and in F<sub>1</sub> generation pink flowers were obtained. When pink flower were selfed, the F<sub>2</sub> generation showed white,red and pink flowers. Choose the incorrect statemes from the following:
  - (1) Law of Segregation does not apply in this experiment.
  - (2) This experiment does not follow the Principle of Dominance.
  - (3) Pink colour in F<sub>1</sub> is due to incomplete dominance.
  - (4) Ratio of  $F_2$  is  $\frac{1}{4}$  (Red) :  $\frac{2}{4}$  (Pink) :  $\frac{1}{4}$  (White)
- 9. How many true breeding pea plant varieties Mendel select as pairs, which were similar except for one character with contrasting traits?
  - (1) 2

(2) 14

(3) 8

- (4) 4
- 10. The production of gametes by the parents, formation of zygotes, the  $F_1$  and  $F_2$  plants, can be understood from a diagram called:
  - (1) Punch square

(2) Punnett square

(3) Net square

(4) Bullet square