

B.Sc. (part – I) (Semester – II) (NEP) Examination, October/Nov- 2023

ZOOLOGY

Genetics (Paper – IV)

Sub. Code: 90227

Day and Date: Saturday, 11/11/2023

Total marks: 40

Time: 10:30 am to 12:30 pm

Instructions: 1) All questions are compulsory.

2) Draw neat and labeled diagrams wherever necessary.

3) Figures to right indicate full marks.

Q.1) Choose the correct alternative from the following.

[08]

1) Is father of genetics.

a) Mendel, b) Darwin, c) Lamark, d) Robert hook.

2) The genotype of blood group 'O' is

a) $I^A I^B$, b) $I^B I^B$, c) $I^i I^i$, d) $I^A I^A$.

3) The best example of incomplete dominance is

a) *Mirabilis Jalapa*, b) Rose, c) Lotus, d) Sunflower.

4) In hybridization technique Mendel had selected two plants of unlike genetical constitution.

A) *Pisum sativum*, b) jawar, c) Rice, d) Sunflower.

5)is phenotypic monohybrid ratio.

a) 2:1, b) 3:1, c) 4:1, d) 1:3.

6) Mechanism of crossing over occurs during

a) Pachytene of prophase, b) Second meiotic division,

c) Before synapsis, d) Diplotene

7) Blood group is universal recipient.

a) B, b) A, c) AB, d) O.

8) An organism is $4n$ this condition is called

a) Nullisomy, b) Tetraploidy, c) Trisomy, d) Aneuploidy.

Q.2) Attempt any two:

[16]

- A) Describe the different types of sex determination mechanisms.
- B) Give an account on law of dominance with suitable example.
- C) What is crossing over? Describe the mechanism of crossing over.

Q.3) Attempt any four:

[16]

- A) Monohybrid cross.
- B) Blood groups.
- C) Co-dominance.
- D) Mechanism of sex determination in human.
- E) multiple alleles.
- F) Incomplete dominance.