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**SUBJECT CODE NO:- 2231**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. T.Y (Sem-VI)**  
**Examination March/April-2022 (To Be Held In June/July-2022)**  
**Dairy Science and Technology Paper- XIX**  
**(Genetics and animal breeding)**

[Time: 1:53 Hours]

[Max. Marks:50]

Please check whether you have got the right question paper.

N.B

- i. Attempt all questions.
- ii. Illustrate your answer with suitable labeled diagram.

Q.1 Define mutation. Describe types and effects of mutation. 20

OR

State the methods of selection. Describe performance testing. 20

Q.2 Define variation. Describe chromosomal abbreviations. 20

OR

Write short notes on any four of the following. 20

- a) Modified dihybrid cross
- b) Sex linkage and sex limited inheritance
- c) Anatomical causes of sterility
- d) Progeny testing
- e) Criss crossing
- f) Close and line breeding

Q.3 Write correct answer of the following multiple choice questions 10

- 1) ----- takes place in gonads
 

a) Meiosis	b) Mitosis
c) A and B	d) None of above
- 2) In molecular term ----- is a segment of DNA molecule?
 

a) Chromosome	b) Gene
c) Allele	d) Gamete
- 3) In Mendel's dihybrid cross phenotypic ratio is -----
 

a) 15:1	b) 9:7
c) 9:3:3:1	d) 13:3
	e)

- 4) Change in fertility is an indicator of ----- mutation.
- a) Gene
  - b) Point
  - c) Chromosomal
  - d) All above
- 5) An ----- occurs when a segment of a chromosome breaks off and reattaches to the opposite ends.
- a) Deletion
  - b) Duplication
  - c) Translocation
  - d) Inversion
- 6) ----- means the mating full brother to full sister.
- a) Close breeding
  - b) Line breeding
  - c) Out breeding
  - d) Out crossing
- 7) ----- is example of species hybridization.
- a) Hinny
  - b) Jersey
  - c) Deoni
  - d) All above
- 8) ----- is the practice of breeding sires of a given breed to non-descript females and their off springs for generation after generation.
- a) Criss crossing
  - b) Triple crossing
  - c) Grading-up
  - d) Out crossing
- 9) In ----- the parents are chosen on the basis of phenotype performance of their progeny.
- a) Progeny testing
  - b) Ring selection
  - c) Pedigree selection
  - d) Performance testing
- 10) The general rule permits less than ----- services per conception.
- a) 04
  - b) 05
  - c) 03
  - d) 02