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SUBJECT CODE NO:-B-2084
FACULTY OF SCIENCE & TECHNOLOGY
B.Sc. F. Y. (Sem-II)
Examination November/December- 2022
Zoology Paper-V
Genetics – I

[Time: 1:30 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 labelled diagram.
- Q.1 What is mutation? Explain spontaneous and induced mutation? 20
- OR**
- What are sex chromosomes? Explain in detail genic balance mechanism of sex determination
- Q.2 Give an account of Mendel's law of Inheritance and explain Law of segregation with example? 20
- OR**
- Write a short note on any four
- (a) Test cross
 (b) CO₂ sensitivity
 (c) Supplementary factor
 (d) Rh factor
 (e) Turners syndrome
 (f) Types of chromosome
- Q.3 Select and write correct answer from the given alternatives in each question 10
- (1) Gene mutation occurs at the time of
- (a) Cell division (b) DNA repair
 (c) RNA transcription (d) DNA replication
- (2) _____ Law is of great value for plant breeders who tries to produce new plants with new combination
- (a) Law of segregation (b) Law of recombination
 (c) Law of dominant (d) Law of Independent

- (3) Gene for colour blind is _____ present on X-chromosome
(a) Recessive (b) Heterozygous
(c) Dominant (d) Homozygous
- (4) _____ is an example of cytoplasmic inheritance
(a) Coat colour in rabbit (b) Supplementary gene
(c) Kappa particle in paramecium (d) Epistasis
- (5) Erythroblastosis foetalis is a _____
(a) Anemia (b) Pleiotropy
(c) Albinism (d) Hemolytic disease
- (6) Mendel select garden pea as his experimental material because
(a) Flowers are self fertilized (b) Easy to cultivate
(c) Short live cycle (d) All above
- (7) Down syndrome is commonly is known as
(a) Sex-linked disease (b) Mongolism
(c) Albinism (d) None of these
- (8) Mendel's law of segregation can be checked by _____ method
(a) Dihybrid cross (b) Monohybrid cross
(c) Back cross (d) All above
- (9) Gynandromorphy is _____
(a) Intersex (b) Super male
(c) Both a and b (d) Female with male trait
- (10) The resemblance between parent and their offspring is called
(a) Variation (b) Heredity
(c) Evolution (d) None of these