



Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
End Semester Examination: OCT/NOV:2024
Faculty: Science and Technology

Program: B.Sc (Gen 03)
Program (Specific): Zoology
Class: T.Y.B.Sc.
Name of the Course: Genetics
Course Code: 24-ZO-354
Paper: IV

Semester: V

SET: A
Course Type: DSEC
Max.Marks: 35

Time: 2Hr

Instructions to the candidate:

- 1) *There are 4 sections in the question paper. Write each section on separate page.*
- 2) *All Sections are compulsory.*
- 3) *Figures to the right indicate full marks.*
- 4) *Draw a well labelled diagram wherever necessary.*

SECTION: A

Q1) Multiple Choice Question

- 1) The tendency of an offspring to resemble its parent is known as **5**
a) Variation b) Heredity c) Resemblance d) Inheritance
2. Who is known as the “Father of Genetics”?
a) Morgan b) Mendel c) Watson d) Bateson
- 3) The alternate form of a gene is
a) Alternate type b) Recessive character c) Dominant character d) Allele
4. The genotypic ratio of a monohybrid cross is
a) 1:2:1 b) 3:1 c) 2:1:1 d) 9:3:3:1
5. The crossing of F1 to either of the parents is known as
a) Test cross b) Back cross c) F1 cross d) Purity of gametes

Q2) Very short answer questions (Attempt any 4/6)

4

- i) Define cistron
- ii) Explain the term genetic code
- iii) Describe Homozygous
- iv) what is Polyploidy?
- v) what is Population genetics?
- vi) Explain Autosome

SECTION: B

Q3) Short answer questions (Attempt any 4/6)

8

- i) Explain X-linked disorder.
- ii) Write a note on chromosome.
- iii) Discuss modern concept of Gene.
- iv) Explain ABO blood group system.
- v) Describe Gynandromorphism.
- vi) Give the importance of Karyotype.

SECTION: C

Q4) Short answer questions (Attempt any 4/6)

8

- i) Describe Genetic counselling.
- ii) Explain codominance.
- iii) Discuss on Lethal gene.
- iv) Explain the Hardy Weinberg law.
- v) What are the alleles of A and B blood group
- vi) write a note on Patau syndrome.

SECTION: D

Q5) Long answer type Questions

10

Attempt any two of the following (2/4)

- a) Describe incomplete dominance with suitable example.
- b) Explain the abnormalities in Down's Syndrome.
- c) What is sex determination? Interpret ZZ-ZW type sex determination.
- d) Illustrate any two types of Mutation.