

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2018
(Fifth Semester)

Branch - ZOOLOGY

GENETICS

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 2 = 20)

Answer in one or two sentences ;

- 1 Dihybrid cross.
- 2 Alleles.
- 3 Epistasis.
- 4 Multiple Genes.
- 5 Linkage.
- 6 Chiasma.
- 7 Inversion.
- 8 Euploidy.
- 9 Alcaptonuria.
- 10 Gene flow.

SECTION - B (25 Marks!)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a Define the law of dominance and law of segregation.
OR
b Explain incomplete dominance with an example.
- 12 a What is erythroblastosis foetalis? Explain.
OR
b Describe the inheritance of supplementary genes with example.
- 13 a Explain the extra chromosomal inheritance of Kappa particles.
OR
b Describe the inheritance of haemophilia in man.
- 14 a What is aneuploidy? Write a short note on its 3 types.
OR
b Explain the features of Down's syndrome.
- 15 a Give a short account on Phenylketonuria.
OR
b Explain the following: a) Gene frequency and b) Genetic drift

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Define the law of independent assortment. Explain the law with a suitable example.
- 17 What are multiple genes? Explain their inheritance.
- 18 Write a detailed essay on Linkage.
- 19 Give an elaborate account on Klinefelter's syndrome.
- 20 What is eugenics? Add a detailed note on its two types.