Second Semester B.Sc. Degree Examination, May/June 2019

(CBCS Scheme – 2018-19 onwards)

Genetics

Paper GNT 201 : PRINCIPLES OF GENETICS

Time : 3 Hours]   [Max. Marks : 70

Instructions to Candidates : Draw diagrams wherever necessary.

PART – A

Answer any **FIVE** of the following :   **(5 × 3 = 15)**

1. Distinguish between phenotype and genotype.

2. Explain 'Preformation theory'.

3. Define monohybrid back cross with an example.

4. What is co-dominance? Give an example.

5. Write a note on 'Rh factor' in human.

6. Define 'mode' with an example.

7. What is sex differentiation?

PART – B

Answer any **FIVE** of the following :   **(5 × 5 = 25)**

8. Explain 'Mutation Theory'.

9. Give an account on 'Biography of Mendel'.

10. What is incomplete dominance? Explain with an example.

11. Define Non-Epistasis. Explain comb pattern in poultry.

12. Mention the rules of probability.

13. The RBC's count of 8 persons is 35, 44, 38, 36, 39, 40, 42 and 41 lakh/mm². Find the median of the series.

14. Give an account on 'Free Martins'.

PART – C

Answer any **TWO** of the following :   (2 × 10 = 20)

15. What is Dihybrid cross? Explain with a suitable example.

16. Define Dominant Epistasis. Explain it in fruit color of <u>Cucurbita</u> <u>Pepo.</u>

17. Find mean and standard deviation by direct method for the following distribution :

No. of births :	250	251	252	253	254	255
No. of days :	5	10	13	18	12	8

18. Give an account on XX-XY and ZZ-ZW type of sex determination.

PART – D

Answer any **ONE** of the following :   (1 × 10 = 10)

19. Give an account on Genic Balance Theory of Bridges.

20. Explain :

(a) Student's t-test

(b) Variance