Roll No:

Total Number of Pages : 1   AR-18   M. Sc

M. Sc 3rd SEMESTER REGULAR EXAMINATIONS, NOV/DEC 2019-20

Subject code: III-2

Subject: Genetics

Time: 2 Hours   Max Marks: 40

The figures in the right hand margin indicate marks.

Answer **ANY FOUR** Questions: [4×10 =40]

1. What do you mean by crossing over? Write in brief the role of crossing over in inheritance.

2. Discuss in brief the role of different genes during developmental process.

3. Describe the Hardy Weinberg principle and discuss about its application in population genetics.

4. What is pedigree and its notations? With a suitable example explain how human pedigree analyse is helpful in genetic diseases.

5. Write a short notes on

   (a) Multiple alleles   (4 marks)

   (b) Incomplete penetrance   (2 marks)

   (c) Sex-influenced expression   (4 marks)

6. What are the three laws of Mendel? Explain in details how these 3 laws are derived from monohybrid and dihybrid cross.

7. Write in details about chromosomal abnormalities?

8. Explain the following:

   (a) Mitochondrial inheritance   5 marks

   (b) Genomic imprinting   5 marks

              (OR)

   (c) Lyon hypothesis   5 marks

   (d) Quantitative traits   5 marks

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