Roll No. | | | | | | | | | | | | | **Total No. of Pages: 02**

Total No. of Questions: 09

B.Sc.(Agriculture) (2014 & Onwards) (Sem. – 3)

INTRODUCTION TO GENETICS

M Code: 72554

Subject Code: BSAG-304

Paper ID: [72554]

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATES:

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION A

1. Define or briefly describe the following:

   a) Homologous Chromosomes

   b) Replication Fork

   c) Frame shift Mutation

   d) Post translational Modifications

   e) Sigma Factor

   f) Crossing over

   g) Chromosomal aberrations

   h) Histone

   i) tRNA

   j) Multiple Alleles

SECTION B

2. Differentiate between Qualitative and Quantitative trait giving examples
3. Explain Mendel's Dihybrid Cross Experiment and its significance.
4. What is transcription? Discuss role of RNA polymerases in transcription process.
5. Define mutation. Explain different methods used for induction of mutation.
6. Define karyotype. Discuss its role in genetics

SECTION C

7. Elaborate on current theories of evolution of wheat.
8. Explain different stages of Mitotic process along with schematic diagrams
9. Write short note on Genetic Code.