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

Total No. of Questions : 09

B.Sc. (Agriculture) (Sem.–3)

INTRODUCTION TO GENETICS

Subject Code : BSAG-304

M.Code : 72554

Date of Examination : 12-12-22

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 student has to attempt ANY FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and student has to attempt ANY TWO questions.**

SECTION-A

1. Write short notes on :

a) Okazaki fragments

b) Down's syndrome

c) Nucleic acid

d) Lamp brush chromosomes

e) Law of independent assortment

f) Equational division

g) Color blindness

h) Multiple alleles

i) Point mutation

j) XXY condition.

SECTION-B

Differentiate between:

2. Nucleotide and Nucleoside.

3. Sex linked and Sex influenced Traits.

4. Qualitative traits and Quantitative traits.

5. Physical mutagens and Chemical mutagens.

6. Translocation and Inversion.

SECTION-C

7. Discuss in detail the process of transcription in a prokaryote (draw neat and well labeled diagram). Also discuss the characteristic features of genetic code.

8. a) Prove that DNA is a genetic material by citing a suitable experimental evidence.

   b) Explain cytoplasmic inheritance with suitable examples **(any two).**

9. a) Discuss the evolutionary history of cotton.

   b) Explain the mechanisms **(any two)** of crossing over.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.