

Exam. Code : 103202

Subject Code : 1288

B.A./B.Sc. Semester—II

BOTANY

Paper—II (B) (Genetics)

Time Allowed—3 Hours] [Maximum Marks—35

Note : Attempt FIVE questions in all. Question No. 1 is compulsory. All questions carry equal marks.

1. Give short answers :

(a) Centromere

(b) Semi conservative DNA replication

(c) Cytokinesis

(d) Template strand

(e) Anticodon loop

(f) Homozygosity

(g) Polymorph.

1×7=7

2. Discuss properties of Genetic material DNA versus RNA. 7

3. Describe various stages of Mitosis with the help of well labelled diagrams. 7

4. Describe structure and working of Transcription unit and the gene. 3.5×2=7

2546(2517)/STB-16931

(Contd.)

5. Discuss structure of the tRNA and the process of Translation. 7
6. Describe 1D, 2D and 3D structure of protein biomolecules and their significance. 7
7. Discuss gene regulation mechanism in prokaryotes. 7
8. Discuss Mendel's Law of segregation of characters with suitable examples. 7
9. Discuss role of Mutations in genetic variations and adaptations. 7