

2020/TDC/ODD/SEM/BTCP-301/325

(2)

**TDC Odd Semester Exam., 2020
held in July, 2021**

BIOTECHNOLOGY

(Pass)

(3rd Semester)

Course No. : BTCP-301

(Genetics and Molecular Biology)

Full Marks : 35

Pass Marks : 12

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

1. Discuss Mendelian law of inheritance. 7

OR

2. Describe sex determination in plants. 7

3. Enumerate mutagenic agents and their mode of action. 7

OR

4. Discuss analysis of mutation in biochemical pathway. 7

5. Describe special chromosomes with example. 7

OR

6. Discuss gene mapping with suitable diagram. 7

7. Write on any *two* of the following : $3\frac{1}{2}\times 2=7$

(a) Crossing over

(b) Down syndrome

(c) One gene-one enzyme hypothesis

(d) Lac operon

8. What are transposons? What are the roles of transposons? Give example. 7

OR

9. Describe different steps of eukaryotic gene expression. 7
