

2019

B.SC

3rd Semester Examination

BOTANY (Honours)

Paper - C 7-T

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full Marks. Candidates are required to give their answers in their own words as far as practicable. Illustrate the answers wherever necessary.

1. Answer any *five* questions : 2 × 5 = 10
- a) Distinguish between oligogene and Polygene? 2
 - b) What is pericentric inversion? 2
 - c) What is nullisomy? 2
 - d) How does alkylating agent act on genetic material? 2
 - e) Explain epistasis by citing an example. 2
 - f) What is synaptonemal complex? 2
 - g) Explain penetrance and expressiorty of characters. 2
 - h) Mention the enzymes responsible for DNA repairing. 2

[Turn Over]

(2)

2. Answer any *four* questions of the following : $5 \times 4 = 20$

a) What is allopolyploidy? Mention the process of development of allopolyploidy state its significant.

1+2+2

b) How is cis-trans complementation used to test functional allelism? 5

c) Explain sex linked inheritance with suitable example. Contrast it with sex influenced character. 3+2

d) Distinguish between Transition and Transversion. How does deamination agent bring about mutation? 2+3

e) What is population bottleneck? Explain how the genetic status of a population changes due to founder effect. 2+3

f) Write briefly on the molecular concept of gene. 5

3. Answer any *one* of the following : $10 \times 1 = 10$

a) Define speciation. Describe and contrast between two types of speciation. 2+8

b) What is maternal effect in extranuclear inheritance? Explain the phenomenon with suitable example. 2+8
