



K18P 0098

Reg. No. :

Name :

**Second Semester M.Sc. Degree (Regular/Supplementary/Improvement)
Examination, March 2018
(2014 Admn. Onwards)
BOTANY
BOT 2C 08 : Cell and Molecular Biology**

Time : 3 Hours

Max. Marks : 60

I. Answer **any two** of the following :

(2×8=16)

1) Write an account on Karyotyping. Add a note on its significance in identifying the genetic disorders.

OR

2) Discuss in detail, the mechanism of communication in plants and animals.

3) Explain the organisation of eukaryotic genomes. How it differs from prokaryotic genome organisation ?

OR

4) What are transposons ? Explain the mechanism of their action.

II. Answer **any two** of the following :

(2×6=12)

5) a) Mitochondrial genomes

b) Satellite DNA

c) NPC proteins.

6) a) Cyclin and cyclin dependent kinases

b) Cytokinesis

c) Mitogens.

7) a) Epigenetic regulation

b) Transcription activators

c) Operon.

P.T.O.

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III. Answer **any six** of the following :

(6×3=18)

- 8) Nuclear – cytoplasmic transport.
- 9) Endomitosis and somatic reduction.
- 10) Trisomy and Tetrasomy in humans.
- 11) Gap junctions.
- 12) Cancer stem cells.
- 13) Alternate forms of DNA.
- 14) Transcription coupled repair.
- 15) Gene expression disorders.

IV. Answer **any seven** of the following :

(7×2=14)

- 16) Introns
- 17) Cystis fibrosis
- 18) Cd_k activating kinase
- 19) Edward syndrome
- 20) Apoptosis
- 21) Tumor initiators
- 22) Big gene
- 23) st RNA
- 24) Copia
- 25) Sequestration.