

K18P 0098

Reg. No. :

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

Answer any two of the following :

 $(2 \times 8 = 16)$

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

OR

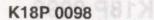
- 2) Discuss in detail, the mechanism of communication in plants and animals.
- 3) Explain the organisation of eukaryotic genomes. How it differs from prokaryotic genome organisation?

OR

- 4) What are transposans? Explain the mechanism of their action.
- II. Answer any two of the following:

 $(2 \times 6 = 12)$

- 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.





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:

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

3) Explain the organisation of sukaryotic gene