



**K20P 0305**

Reg. No. : .....

Name : .....

**II Semester M.Sc. Degree (CBSS – Reg./Suppl./Imp.)**

**Examination, April 2020  
(2014 Admission Onwards)**

**BOTANY**

**BOT 2C08 : Cell and Molecular Biology**

Time : 3 Hours

Max. Marks : 60

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

**(2×8=16)**

1) Explain cell cycle and its regulation.

OR

2) Describe DNA replication in eukaryotes.

3) Discuss epigenetic control of Cancer.

OR

4) Write an account on the Operon concept.

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

**(2×6=12)**

5) a) Mitochondrial genome.

2

b) Mitochondrial codons.

2

c) Introns.

2

6) a) Cell-cell adhesions.

3

b) Plasmodesmata.

2

c) Cadherins.

1

7) a) Transposans.

1

b) Mechanism of action.

3

c) Transposans and evolution.

2

P.T.O.



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

(6×3=18)

- 8) Packaging of DNA into chromosomes.
- 9) Motor proteins.
- 10) Karyotype and idiogram.
- 11) Endomitosis and somatic reduction.
- 12) Programmed cell death.
- 13) Genetic basis of cancer.
- 14) Retinoblastoma and E2 proteins.
- 15) Robertsonial translocations.

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

(7×2=14)

- 16) Aging.
- 17) Down syndrome.
- 18) CDK inhibitory proteins.
- 19) Selectins.
- 20) NPC proteins.
- 21) Mi RNA.
- 22) F and Alu elements.
- 23) shrsNA.
- 24) p53 genes.
- 25) Big gene.
- 26) Stem cell.