K16P 0459

Reg. No. : .....

Name : .....

Second Semester M.Sc. Degree (Regular/Supplementary/Improvement) Examination, March 2016

(2013 & Earlier Admn.)

BOTANY

Paper – B VI : Cytology, Genetics and Molecular Biology

Time : 3 Hours Max. Marks : 70

***Instruction** : Draw diagrams **wherever** necessary.*

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

1) Explain mitotic-cell division. Add a note on cytokinesis and cell plate formation.

2) Describe the phenotype of a transformed cell. Add a note on the genetic basis of cancer.

3) Explain gene regulation in eukaryotes.

4) Write an account of human genome project. **(2×10=20)**

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

5) Write an account of gene targeting in crop plants and microorganisms.

6) Give an account of physical and chemical mutagens. **(1×10=10)**

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

7) Mechanism of programmed cell death.

8) Polytene chromosome.

9) Eukaryotic genome organization.

10) Post transcriptional processing of RNA.

11) Enzymes involved in DNA replication. **(3×5=15)**

P.T.O.

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

12) Euchromatin.

13) Cyclin dependent kinases.

14) Structure of microfilament.

15) Environmental mitogenicity testing.

16) Euthenics.

17) Heterochromatization.

18) Transposable elements in bacteria.

19) Western blot. **(5×3=15)**

V. Answer **any five** of the following :

20) Satellite DNA.

21) Q-banding of chromosome.

22) Polyadenylation.

23) Attenuation.

24) Hardy Weinberg law.

25) B-DNA.

26) Photolyase. **(5×2=10)**
