SN – 373

V Semester B.Sc. Examination, Nov./Dec. 2017
(Semester Scheme) (NS) (2013-14 and Onwards)
(Repeaters – Prior to 16-17)
BOTANY – VI
Cytology, Genetics and Evolution and Plant Breeding

Time : 3 Hours

Max. Marks : 70

Instructions : *1) Answer **all** Parts.*
*2) **Draw** diagrams **wherever** necessary.*

PART – A

A. Answer **any seven** of the following : (7×2=14)

1) Write two principles of Electron Microscope.
2) What is SAT Chromosome ?
3) What is Back cross ?
4) Define Mutation.
5) Define Incomplete dominance.
6) Name any two principles of Darwinism.
7) Differentiate Heterochromatin and Euchromatin.
8) Differentiate between Intergeneric and Interspecific crosses.
9) What are homologous chromosomes ?

PART – B

B. Answer **any six** of the following : (6×4=24)

10) What is synaptonemal complex ?
11) Describe the process of paracentric inversion.
12) Explain the Nucleosome model.
13) Give an account of Multiple factor inheritance.
14) Explain Monohybrid cross with suitable example, and define the Laws of Dominance and Recessiveness.
15) Describe Trisomy with an example.
16) Describe Prophase and Telophase stages of Mitosis and add a note on its significance.

P.T.O.

PART – C

C. Answer **any four** of the following : (4×8=32)

17) Describe any two methods of vegetative propagation.

18) Explain supplementary factors with an example.

19) Describe Larmarckism.

20) Give a brief account on Extra-chromosomal Inheritance.

21) In Garden pea, Tall (T) is dominant over dwarf (t) and Round seed (R) is dominant over wrinkled (r). Give the result of the following crosses in Pea.

i) Tt Rr × ttRr

ii) TtRr × Ttrr

iii) ttrr × ttRr

iv) TTrr × Ttrr.

22) What is epistasis ? Give an example.