Roll No. _____

SVIS-N 313 A-18
B.Sc. VIth Semester Degree Examination
BOTANY
(Cell Biology, Genetics Plant Breeding, Plant Propagation)
Paper : 6.1
(New)

Time : 3 Hours   Maximum Marks : 80

Instructions to Candidates:

1)   *Answer all the questions*

2)   *Diagrams will enhance the value of Answers.*

SECTION - A

I.   Answer any "**TEN**" of the following in **two** or more sentences.   (10×2=20)

1.   What are Nucleotides? Give an example.

2.   What is Idiogram?

3.   What are Genetic RNA.

4.   Distinguish between Monosomy and Trisomy.

5.   What is a test cross.

6.   Distinguish between Geno type and phenotype.

7.   Define polygenic inheritance.

8.   What is induced mutation.

9.   What are Terminating codons? Mention any one.

10.   What is Intra - specific Hybridization.

11.   Name any Two Plant breeding centres in India.

12.   Give the schematic representation of central Dogma.

II.   Answer any **FOUR** of the following questions.   (4×5=20)

13.   With a labelled diagram, explain the structure of mRNA.

14.   With a labelled diagram explain the salivary gland chromosome.

15. Explain Mendel's law of segregation.

16. What is Sex determination? Explain sex determination in Drosophila.

17. What is protein synthesis? Explain Transcription.

18. Explain the process of plastid inheritance in Mirabilis plant.

III. Answer any **FOUR** of the following questions: (4×10=40)

19. With a suitable example, explain supplementary gene interaction.

20. What is linkage? Explain the process of linkage in maize.

21. Explain the methods of Hybridization.

22. What is DNA replication? Explain semi conservative type of DNA replication.

23. Write notes on :

   a) Prokaryotic cell.

   b) Endo plasmic Reticulum.

24. In Pea Plant Tallness (T) is dominant over Dwarfness (t), Roundness of seeds (R) is dominate over wrinkled seeds (r), what will be the genotypic phenotypic ratios of following crosses.

   i) TtRr × ttrr

   ii) TtRR × TTrr