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SVIS 345 A-2K12

B.Sc. VIth Semester Degree Examination

Botany

Cytology, Genetics, Plant Breeding and Biostatistics

Paper - 6.1

Time : 3 Hours Maximum Marks : 80

Instructions to Canditates :

1) *Answer **all** the questions.*
2) *Draw **diagrams** wherever necessary.*

I. Answer the followings **(15×1=15)**

1. Who discovered the cell?

2. Mention any two cell wall substances.

3. What is unit membrane?

4. What is cisternae?

5. Name any two enzymes present in nucleo plasma.

6. What is test cross?

7. What is complete linkage?

8. Define recessive epistasis.

9. What is a coders?

10. What is polyribosome complex?

11. Define selection.

12. Name any one Indian plant breeder.

13. What is a Clone?

14. Define regression.

15. Define Biostatistics.

II. Answer **any five** of the following **(5×5=25)**

16. Explain the ultrastructure of nucleus.

17. Describe the major functions of Mitochondria.

18. Explain the structure of polytene chromosome.

19. What are complimentary genes? Explain the same with suitable example.

20. What is RNA? Give a brief account of different types of RNA's found in the cell.

21. Describe the general properties of genetic code.

22. Explain the terms mean 4 mode with suitable examples.

III. Answer **any four** of the following **(4×10=40)**

23. What is chloroplast? Describe the ultrastructure of the chloroplast.

24. What is crossing over? Explain the mechanism of crossing over.

25. Describe the types of chromosomal aberrations.

26. Explain with suitable example the law of independent assortment.

27. Describe the various steps involved in the hybridization technique.

28. In summer squash the gene for white fruit colour (W) is epistatic to that of yellow (Y) which dominant over gene (*y*). Determine the fruit colour of the offsprings of following crosses

a) Ww Y*y* X Ww*yy*

b) Ww*yy* X ww Y*y*.