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K19U 0083

Reg. No. : .....

Name : .....

VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improv.) Examination, April 2019
(2014 Admission Onwards)
CORE COURSE IN BOTANY/PLANT SCIENCE
6B11 BOT/PLS : Genetics, Biostatistics and Evolution

Time : 3 Hours Max. Marks : 40

SECTION – A

Answer **all** :

1. 22 AA + XXY = 47 is
   a) Klinefelter's syndrome b) Turner's syndrome
   c) Down's syndrome d) All of these

2. Complementary gene interaction ratio is
   a) 9 : 3 : 3 : 1 b) 9 : 7 c) 13 : 3 d) 15 : 1

3. Author of "*On The Origin of Species*".
   a) Charles Darwin b) Lamarck
   c) Morgan d) Weismann

4. *Theory of linkage* was proposed by
   a) Weismann b) Lamarck
   c) Morgan d) Charles Darwin **(4×1=4)**

SECTION – B

Answer **any eight** :

5. Explain Klinefelter's syndrome.

6. Write notes on Chi-square test.

7. Describe genetic drift.

8. Distinguish between convergent and divergent evolution.

P.T.O.

9. Define cross over value.
10. What are multiple alleles ?
11. Explain industrial melanism.
12. Write notes on backcross.
13. Give an account on the general characteristics of species.
14. What do you mean by complete linkage ?
15. What is the role of polyploidy on evolution ?
16. What is natural selection ? **(8×2=16)**

SECTION – C

Answer **any four** :

17. Illustrate dominant epistasis with the help of suitable example.
18. Explain genic balance theory.
19. Give an account on ANOVA.
20. Explain Hardy-Weinberg Law and describe the factors responsible for changes in gene frequencies of a population.
21. How will you construct a gene map ?
22. Explain self sterility in *Nicotiana* and describe the progenies obtained due to crosses between various self sterility types. **(4×3=12)**

SECTION – D

Answer **any one** :

23. Enumerate the methods of presenting data.
24. Describe cytoplasmic inheritance citing suitable exmples.
25. Discuss the principles of Darwinism. **(1×8=8)**
