



K20U 0088

Reg. No. :

Name :

**VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improv.)
Examination, April 2020
(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. Correns observed maternal plastid inheritance in
 - a) *Pisum sativum*
 - b) *Lathyrus sativus*
 - c) *Mirabilis jalapa*
 - d) *Antirrhinum majus*
 2. Duplicate gene action ratio is
 - a) 9 : 3 : 3 : 1
 - b) 9 : 7
 - c) 13 : 3
 - d) 15 : 1
 3. In bacteria and bacteriophages, the gene map is
 - a) Linear
 - b) Circular
 - c) Unbranched
 - d) None of these
 4. Evolution that operates within the level of species is
 - a) Micro evolution
 - b) Macro evolution
 - c) Mega evolution
 - d) Genetic drift
- (4×1=4)**

SECTION – B

(Answer **any eight**)

5. Write on pleiotropic genes citing an example.
6. Define Euphenics and Eugenics.
7. Write short notes on sex linked inheritance.

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8. Explain any two measures of dispersion.
9. What is meant by allopatric speciation ? Explain.
10. Write notes on genetic drift.
11. Bring out the salient features of the ABO Blood group system.
12. Explain the type of genic interaction reported in Shepherd's purse plant.
13. What is neo Darwinism ?
14. Explain incomplete dominance.
15. What do you mean by dominant back cross ?
16. What is coefficient of coincidence ? **(8×2=16)**

SECTION – C

(Answer any four)

17. Explain the mechanism of crossing over.
18. Compare progressive and retrogressive evolution.
19. Explain the inheritance of comb pattern in fowls.
20. Describe zig-zag inheritance in haemophilic persons.
21. Explain the postulates of Lamarck.
22. Illustrate complementary gene interaction in *Lathyrus sativus*. **(4×3=12)**

SECTION – D

(Answer any one)

23. Discuss polygenic inheritance citing examples.
24. Write in detail on the phenomenon of speciation.
25. Explain the measures of central tendency. **(1×8=8)**