

DECEMBER 2014

P/ID 40228/PBTH

Time : Three hours

Maximum : 100 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

Each answer should not exceed 50 words.

Write short note on

1. Linkage
2. Holandric genes
3. Antibody
4. Exon
5. Trisomic
6. Hybrid vigour
7. Apomixis
8. Standard error
9. Gene frequency
10. Null hypothesis

PART B — (5 × 6 = 30 marks)

Answer ALL questions.

Each answer should not exceed 250 words.

11. (a) Explain Mendels' experiments.

Or

(b) What is sex linked inheritance? How hemophilia is inherited?

12. (a) Explain the mechanism of crossing over.

Or

(b) What is Gamma garden?

13. (a) Write a note on mitochondrial genome.

Or

(b) What is the objectives of plant breeding.

14. (a) Explain the phenomenon of sexduction.

Or

(b) Explain the importance of *Neurospora* in genetic studies.

15. (a) State Hardy-Weinberg law and mention its significance.

Or

- (b) What is binomial distribution? Explain.

PART C — (5 × 10 = 50 marks)

Answer ALL questions.

Each answer should not exceed 500 words.

16. (a) What is Griffith effect? Explain.

Or

- (b) Bring out the salient features of genetic code.

17. (a) Give an account of sex determination in plants.

Or

- (b) How will you test goodness of fit using Chi-square test?

18. (a) What is mutation breeding? How this technique is applied for the production of new crop varieties?

Or

- (b) What is chromosome map? How it is constructed.

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19. (a) Describe the structure of antibody and mention its types.

Or

- (b) What is syndrome? Write a note on Downs' syndrome and Turners' syndrome.

20. (a) What is tetrad analysis? Explain with an example you have studied.

Or

- (b) Write an essay on genetic counseling.
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