A

Printed Pages : 3

(21119)

Roll No. .....

M.Sc. (Bio-tech.) I-Sem.

NP-3330

M.Sc. (Bio-tech.) Examination, November 2019

FUNDAMENTAL OF GENETICS

(H-101)

(M. Sc. Biotech.)

Time : Three Hours] *[Maximum Marks : 50*

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Attempt all five questions. Each question carries 2 marks. Answer should not exceed 100 words. 5×2=10

1. Muller-5 method
2. Detection of linkage
3. Duplicate gene interaction
4. Holliday intermediate
5. Genic Balance Theory.

Section-B

(Short Answer Questions)

*Note : Attempt any **two** questions. Each question carries 5 marks. Answer should not exceed 250 words.* 2×5=10

6. What do you understand by codominance and incomplete dominance ? Give one example of each.
7. What is pleotropism ?
8. Write a short note on physical mutagens.
9. What forms the basis of blood groups in humans ? Give the possible genotypes of A anf B blood groups.

Section-C

(Detailed Answer Questions)

*Attempt all **three** questions. Each question carries 10 marks. Answer is required in detail.* 10×3=30

10. What is mutation ? With the help of examples, discuss its role in crop improvement.
11. Write notes on :
    (a) Gynandromorphs
    (b) Sex anomalies in humans.

12. Explain the concept of multiple alleles with the help of the example of self in compatibility in *Nicotiana*.

13. What is linkage mapping ? What are its limitations ?

14. Explain Mendel's principles of segregation and independent assortment. Give suitable examples.