F–0676	Sub. Code
	7MBO2C3

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Second Semester

Botany

FUNDAMENTAL PROCESSES CELL COMMUNICATION AND CELL SIGNALING

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is DNA damage?

2. Define DNA repair mechanism.

3. Explain Transcription.

4. Explain Translation.

5. Give some examples of second messengers.

6. What is transduction pathways?

7. Define antigenicity.

8. Share some examples of antibody engineering.

9. Define antibody engineering.

10. Define Immunity.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write a short note on repair mechanism.

Or

(b) Write notes on RNA synthesis.

12. (a) Briefly explain the aminoacylation of tRNA.

Or

(b) Explain the identity of tRNA.

13. (a) Write a short note on integrins.

Or

(b) Explain about Quorum sensing.

14. (a) What are the innate immune system?

Or

(b) Give an account on adaptive immune system.

15. (a) How to analyze complement systems?

Or

(b) Comment on Primary immune modulation.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain fidelity of replication

17. Write a essay on Homologous and site – specific

18. Describe the translational inhibitors

19. Briefly analyse the antibody interactions

20. Discuss – Humoral immune response

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F–0683	Sub. Code
	7MBO3E4

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023

Third Semester

Botany

Elective – PLANT BREEDING

(CBCS – 2017 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

Write a short note on

1. Asexual reproduction.
2. Genetic variability.
3. Pure-line selection.
4. Apomixis.
5. Germplasm.
6. Acclimatization.
7. Autopolyploid.
8. Genetically Modified Crop.
9. Polygenic trait.
10. Heterosis.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Comment on the undesirable consequences in breeding.

Or

(b) Give an account on selection of characters in breeding.

12. (a) Give an account on breeding methods for vegetatively propagated crops.

Or

(b) Write short notes on breeding methods for self pollinated crops.

13. (a) Give an account on domestication on plants.

Or

(b) Discuss the selection methods in breeding self pollinated crops.

14. (a) Write short notes on mutation breeding.

Or

(b) Give an account on distant hybridization in breeding.

15. (a) Discuss the concept of quantitative inheritance with suitable example.

Or

(b) Comment on the genetic basis of inbreeding depression.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Describe the modes of reproduction in plants.

17. Explain the procedure of hybridization and add a note on its advantages.

18. Describe the selection methods in breeding cross pollinated crops.

19. Write an essay on polyploidy and its role in plant breeding.

20. Discuss back crossing : method and application.

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