SEMESTER – III
Systematic Botany, Economic botany, Ethnobotany, Plant breeding
Course Code: BO1331

I. Write a short note on the following. All questions compulsory. (10 x 01 = 10)

1. Heterosis
2. Emasculation
3. Hybrid vigour
4. Pureline
5. Plant breeding
6. Test cross
7. Back cross
8. Induced mutation
9. Mutagens
10. Inbreeding
11. Acclimatization
12. Give the binomial name of Arogyapacha?
13. Plant introduction.
14. Inter specific hybridization
15. Inter generic hybridization
16. Clonal selction
17. ICRISAT
18. NBPGR

II. Answer any eight (8 x 2 = 16 marks)

1. How are plants propagated through cuttings?
2. Explain inbreeding depression.
3. Explain a) Plant Quarantine b) Acclimatization
4. Explain Mass selection method in crop improvement.
5. Write notes on disadvantages of plant introduction.
6. Explain inter varietal hybridization.
7. Give binomial name of any two medicinally important plants you have studied.
8. What is emasculation briefly describe its procedure.
9. Give the binomial nomenclature of Neem and write down its ethnobotanical uses.
10. Distinguish between composite and synthetic varieties

III. Answer any six (6 x 4 = 24 marks)

1. Describe different methods of plant selection. Add a note on the advantages and disadvantages of pure line selection.

2. Write notes on various mutagens used in mutation breeding.
3. What is polyploidy? Explain origin and effects of autopolyploidy.
4. Explain the importance of genetic variation in crop improvement.
5. Explain Aneuploidy and its importance.
6. Write notes on Heterosis and inbreeding depression.
7. Describe the classification of mutation and its role in plant breeding.
8. What is Euploidy? Explain origin and effects of allopolyploidy.
9. Explain the genetic basis of resistance breeding.
10. Explain the significance of back cross breeding.
11. Write down the polyploidy method adopted for genetic improvement of crops?
12. What are the principles of mass selection?
13. Explain mutation breeding and its achievements.
14. Describe the major objectives of plant breeding.

IV. Write essay on any two of the following. (2 x 15 = 30 marks)

1. Write an essay on various methods of hybridization with suitable examples.
2. What is pure line? Explain pure line selection method of crop improvement.
3.What is plant hybridization? Explain various steps involved in the hybridization procedure.
4. Describe different steps in hybridization and add a note on wide crosses.
5. What is hybridization? What are the different techniques employed in the production of hybrids? Explain different types of hybridization.