**Question Bank-5**

**Course- B.Sc. Biotechnology 6th Semester, B.Sc. CBZ 6th Semester**

**Subject: Genetics & Plant Breeding**

**Topic: Mutation breeding and distant hybridization**

1. **Multiple Choice Questions:**
2. The quickest method of plant breeding is

a) Introduction

b) Selection

c) Hybridization

d) Mutation breeding

1. Somatic hybridization is achieved through
2. Grafting  
   b) Conjugation  
   c) Protoplasgt fussion

d) Recombinant DNA technology

1. Distant hybridization can be done through
2. Ovule culture
3. Embryo rescue
4. Anther culture
5. Pollen culture
6. Transgressive segregants are the outcome of
7. Segregation and recombination
8. heterosis
9. mutations
10. pleiotrophy
11. Alternative forms of a gene is known a Homozygous
12. Mutation
13. gamete
14. allele
15. genotype
16. Mass selection is always based on
17. Genotype
18. Phenotype
19. Progeny test
20. Heritibility
21. Mutation breeding always leads to t he generation of better variety
22. true
23. false
24. Sterility is most pronounced in the F1 generation following
25. Intervarietal hybridization
26. Intravarietal hybridization
27. Intraspecific hybridization
28. Interspecific hybridization
29. Hybrid seeds can be produced through open pollination with the use of
30. Inbreds
31. Clones
32. Pure lines
33. Male sterile lines
34. The first distant hybridization was done by …………….
35. **Short Questions**
36. What is hybridization?
37. What is cross incompatibility?
38. Comment of protoplast fusion.
39. What are Bridge crosses?
40. Comment on dose of mutagen.
41. Differentiate between macro mutation and micro mutations.
42. Differentiate between interspecific and intergeneric hybridization..
43. Differentiate between fully fertile and fully sterile hybridization.
44. **Long Questions**
45. Discuss about the handling of segregating populations in mutational breeding.
46. Describe the constraints and opportunities of mutational breeding in crop improvement.
47. Describe the role of wide crosses in crop improvement.
48. Describe the constraints and opportunities of wide crosses in crop improvement.
49. Explain the process and limitations of embryo rescue.