

## **PG DEPARTMENT OF BOTANY**

### **BSc BOTANY - SIXTH SEMESTER**

#### **BOT 6 B 10 T - GENETICS**

#### **QUESTION BANK**

1. Explain Mendel's experiment
2. What are the characters that selected by Mendel in his experiment?
3. Why Gregor Mendel selected *Pisum sativum* as the experimental plant?
4. Differentiate between complete dominance and incomplete dominance with the help of suitable examples
5. Explain monohybrid and dihybrid cross with examples
6. Write the Mendel's principles
7. Write on co-dominance with example
8. Differentiate between test cross and back cross. Mention the significance
9. What is lethal gene?
10. Define recessive lethality. Explain with example
11. Explain complementary gene action with example
12. Define epistasis. Write its types.
13. Discuss dominant epistasis with example
14. Write note on recessive epistasis with suitable example
15. Explain multiple allelism in ABO blood group system
16. Discuss self-sterility in *Nicotiana*
17. What is Bombay phenomenon?
18. Differentiate between qualitative and quantitative characters
19. Explain inheritance of human skin colour
20. Discuss on inheritance of ear size in Maize
21. What is linkage? Write on different types of linkage
22. Write on the significance of linkage
23. Differentiate between complete and incomplete linkage
24. What is crossing over and write the significance
25. Discuss the different steps of crossing over

26. Differentiate between two point and three point crossing over
27. Write on cytological evidences of crossing over
28. Comment on cross over value
29. Differentiate between interference and coincidence
30. Explain chromosome mapping
31. What you mean by maternal inheritance / extra-nuclear inheritance
32. Explain shell coiling in snail
33. Discuss on plastid inheritance in *Mirabilis*
34. What you mean by Hardy –Weinberg equilibrium

**Dr. Deepa P.**