



THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

Q.1. Answer the following short questions: (15x2=30)

1. Define Plant Tissue Culture?
2. How explants are surface sterilized?
3. What is the phenomenon of “habituation”?
4. How would you prepare pathogen free plants from tissue culture?
5. What are synthetic seeds?
6. Differentiate between micro and macro nutrient in terms of quantity required?
7. Differentiate between somatic and zygotic embryo?
8. What are the sequential stage of somatic embryogenesis?
9. Differentiate between epical meristem and shoot apex with respect to size.
10. Define Secondary metabolites?
11. Why leave material is treated with pectinase during protoplast isolation?
12. What is meant by epigenetic variations
13. What is the purpose of plant propagation?
14. Which technique is used in tissue culture to produce haploid plants.
15. Differentiate between friable and compact callus.

Answer the following questions. (6x5=30)

- Question #2.** Describe various factors involve in cell suspension culture formation?
- Question #3.** Describe advantages and disadvantage of Plant Tissue Culture.
- Question #4.** What is callus culture. Describe various steps involved in callus culturing.
- Question #5.** Write down the aseptic techniques used in tissue culture?
- Question #6.** Describe various Stages of Micropropagation?
- Question #7.** Write down complete procedure for preparation of 1L Morishige and Skoog medium.