

Examrace

Biotechnology Question Bank, Plant Biotechnology, Organogenesis, Micro Propagation

Doorsteptutor material for Bank-PO is prepared by world's top subject experts: **fully solved questions with step-by-step explanation**- practice your way to success.

Questions on Plant Biotechnology

- Q1. Write brief history of development of in vitro techniques of plant cell culture.
- Q2. What are the requirements for establishing a tissue culture laboratory?
- Q3. Write a short note on the composition and preparation of culture medium for plant tissue culture medium.
- Q4. What is an explant? How will you induce callus from it?
- Q5. What is 'organogenesis? What are it's applications?
- Q6. What are the applications and uses of root culture?
- Q7. Describe the process of preparing cell suspension. What are the benefits of using aqueous medium over solid medium?
- Q8. What is micropropagation? How is it different from vegetative propagation?
- Q9. Write the procedure of isolation of protoplasts from the plant cells. What are the applications of protoplast culture?
- Q10. Write a short note on pollen and another culture.
- Q11. Why does a cultured anther permit pollens to develop embryos but not the cultured pollen grains?
- Q12. What is in vitro androgenesis?
- Q13. What is embryo culture and embryo rescue?
- Q14. What are soma clonal variations? What is it's significance in plant tissue culture?
- Q15. Describe how the technique of micropropagation has been applied in the area of horticulture and forestry?
- Q16. What are secondary metabolites? How plant tissue culture has helped to obtain secondary metabolites?
- Q17. What are transgenic plants? Write in detail on selectable markers and their use in production of transgenic plants.
- Q18. Write a short note on molecular farming.

Q19. What is 'biotransformation'?

Q20. What are edible vaccines and edible antibodies?

Q21. Discuss the 'bioethics in plant genetic engineering'.

Q22. What are molecular markers? Discuss in detail different types of molecular markers used in genome mapping.

Q23. What do you know about variable numbers of tandem repeats (VNTRs) and SSRs? Write differences between them. How SSRs are used in genome mapping?

Q24. What are quantitative trait loci (QTL)? Write their mapping by using molecular markers.

Q25. How can you construct genetic maps of plants and animals using RFLP?

Q26. What are the applications of RFLP and RAPD markers?

Q27. Define the following: RFLP, RAPD, VNTR, YAC, QTL, Chromosome walking, PCR.

Q28. What is meant by plant regeneration? Give different pathways of plant regeneration.

Q29. Name a few useful secondary metabolites that can be produced through plant cell culture technology.

Q30. The 'Agrobacterium' is considered as Natural Genetic Engineer of plants. Do you agree?

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