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SUBJECT : BP-405, PHARMACOGNOSY & PHYTOCHEMISTRY-I

B.PHARM. FOURTH SEMESTER

UNIT- III

MCQ

1. Who is regarded as father of tissue culture
a) G. haberlandt
2. Production of secondary metabolites require
a) Cell suspension
3. Synthetic seed is produced by encapsulating somatic embryo with
a) Sodium alginate
4. Hormone pair required for a callus to differentiate are
a) Auxin & cytokinin
5. DMSO is used as
a) Cryoprotectant
6. The most widely used chemical for protoplast fusion as fusogens is
a) Poly ethylene Glycol
7. When Nucleus of one species but cytoplasm of both the parent species is used, following is produced
a) Cybrids
b) Hybrids
8. Unorganized activity dividing mass of cell maintained in a culture is known as
a) Callus
9. Part of plant used for culturing is known as
a) Explant
10. Growth hormone producing apical dorminance is
a) Auxin
11. A medium composed of chemically defined medium is known as
a) Synthetic medium
12. To obtain haploid plant following is cultured
a) Entire anther
13. Following are produced during plant tissue culture
a) somaclonal variations
14. Plant cell with slow totipotency is
a) Meristem
15. Which vector is mostly used for crop improvement
a) Agrobacterium
16. development of an organ from a cell in culture medium is
a) Totipotency
17. Anther culture gives normally
a) Haploid plants
18. In tissue culture medium the embryoids formed from pollen grains is due to

a) cellular totipotency
19. In tissue culture of parenchyma mitosis is accelerated in the presence of
a) Auxin& Cytokinin
20. In plant tissue culture the callus tissue can be regenerated into complete planlets primarily by altering conc. of
a) Hormones
21. A major application of embryo culture is
a) overcoming hybridization barriers
22. The problem of necrosis and gradual senescence while performing tissue culture can be overcome by
a) Spraying cytokinin
23. The final stage in the tissue culture programme before the new plants are taken out fro cultivation in fields is known as
a) hardening
24. In callus culture higher conc. of auxins as compared to cytokinin induce formation of
a) Adventitious roots
25. Plant cell without cell wall is known as
a) Protoplast
26.Somatic hybrids are developed by
a) Protoplast culture
27. First transgenic plant is
a) Tobacco
28. Process of transferring callus in fresh medium for the maintenance of its growth is
a) Subculturing
29. Commonly used solidifying medium for tissue culture medium is
a) Agar
30. Optimum pH of prepared nutrient medium before sterilization is
a) 5-6
31. Protoplast consists of following except
a) Cell membrane
b) cell wall and cell membrane
c) Mitochondria
d) Cell wall

SUBJECTIVE QUESTIONS

Q.1. What is tissue culture & its types?
Q.2. Write the advantages of Plant tissue culture.
Q.3. Write historical development of Plant tissue culture.
Q.4. Enlist the basic requirements of Plant Tissue culture.
Q.5. Enlist the steps involved in general technique for Plant tissue culture.
Q.6. Explain root tip and shoot tip culture briefly.
Q.7. Write about Hairy root culture and Anther and pollen culture.
Q.8. What is callus culture? Explain the steps involved to produce callus culture.
Q.9. What is suspension culture? Explain the procedure involved.
Q.10. Explain the growth curve in suspension culture.

Q.11. Discuss four parameters for measuring growth of cultured cells.
Q.12. Explain atleast three methods to assess the viability of cultured cells.
Q.13. What is protoplast culture? Explain the procedure to obtain protoplast culture.
Q.14. Write the constituents of Murashige and Skoog's Media.
Q.15. What are nutritional requirements for a growth of a culture.
Q.16. Explain the nutritional requirement of inorganic and organic nutrients in media.
Q.17. Explain role of plant growth regulators in growth of a culture.
Q.18. Explain the mechanical and enzymatic methods for isolation of single cell from plant organ.
Q.19. Define: callus, edible vaccine, lag phase, Plant tissue culture, Suspension culture.
Q.20. What is vaccine and edible vaccine?
Q.21. What are ideal properties of an edible vaccine?
Q.22. Briefly explain with the help of a flow diagram the procedure to make an edible vaccine.
Q.23. What are advantages and disadvantages of edible vaccines?
Q.24. Enlist the trials of different edible vaccines for various diseases.
Q.25. List different plants used for edible vaccines.