



ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

QUESTIONS WITH SHORT ANSWERS

20 Marks

Q2. Answer the following questions briefly and to the point. Each question carries two marks.

1. What is Sterilization? How is liquid medium sterilized?
2. Name a few media generally required in plant tissue culturing.
3. What are Callus cultures?
4. What is the role of hormones in callus cultures?
5. Write down the main steps involved in MICROPROPAGATION.
6. What is the importance of Plant Tissue Culture in research work?
7. Give the importance of Anther cultures.
8. How would you prepare Pathogen-free plants in a tissue culture lab?
9. How are the explants sterilized?
10. What do you understand by the term Cellular Totipotency?

QUESTIONS WITH BRIEF ANSWERS

30 Marks

Q3. Answer the following questions briefly focusing on quality of your answer rather than its length.

1. What is Sterilization? Describe various methods of sterilization in Plant Tissue Culture. **10 Marks**
2. What are Callus cultures? Describe various steps involved in callus culturing. **10 Marks**
3. Write note on **10 Marks**
 - a) Tissue culture Laboratory
 - b) Cell Suspension Cultures.



UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program / Sixth Semester – 2019

Paper: Plant Tissue Culture (Advance Course)
Course Code: BOT-315 Part – I (Compulsory)

Time: 15 Min. Marks: 10

Roll No. in Fig.

Roll No. in Words.

Signature of Supdt

ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.

Division of marks is given in front of each question.

This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the correct choice.

(1x10=10)

1. An Autoclave is used for
 - a) Sterilization of liquid media
 - b) Aseptic transfer of media and cultures
 - c) Callus production
 - d) Sterilization of explants
2. An unorganized growth of cells is called as
 - a) Callus
 - b) Tissue
 - c) Explants
 - d) Embryos
3. The best method for haploid culturing is
 - a) Cell cultures
 - b) Protoplast cultures
 - c) Embryo cultures
 - d) Anther cultures
4. Pollen culture technique is used to produce
 - a) Diploid plants
 - b) Hybrid plants
 - c) Haploid plants
 - d) None of these
5. An excised or isolated piece of tissue is termed as
 - a) Explant
 - b) Tissue
 - c) Callus
 - d) Protoplast
6. The tissue culture media can be solidified by adding
 - a) Agar
 - b) Sucrose
 - c) Algin
 - d) All of these
7. The hormone/s used in Plant Tissue Culture is/are
 - a) IAA
 - b) Gibberellin
 - c) Cytokinin
 - d) All of these
8. Electro-fusion is used in
 - a) Callus cultures
 - b) Protoplast cultures
 - c) Embryo cultures
 - d) Anther cultures
9. In autoclave, the media is sterilized at 15 psi pressure at
 - a) 100°C
 - b) 121°C
 - c) 131°C
 - d) 141°C
10. Which one of the following is not used in Plant Tissue Culture
 - a) Suspension cultures
 - b) Seed cultures
 - c) Embryo cultures
 - d) Pollen cultures