

DISCIPLINE: Biotechnology	SEMESTER:5 th Sem	NAME OF THE TEACHING FACULTY: sunil Biswajit maharana
SUBJECT: Th. 3 PLANT BIOTECHNOLOGY	NO. OF DAYS/ PER WEEK CLASS ALLOTTED:04	SEMESTER FROM DATE: 01-10-2021 TO DATE: NO. OF WEEKS:16
WEEK	CLASS DAY	THEORY/ PRACTICAL TOPICS
1 st	1 st	1.1 What is Biotechnology.
	2 nd	1.1 Concept of Plant Biotechnology.
	3 rd	1.1 Concept of Plant Biotechnology.
	4 th	1.2 What is plant Tissue culture.
2 nd	1 st	1.2 Tissue culture laboratory .
	2 nd	1.2 Tissue culture laboratory (Equipments).
	3 rd	1.2 Tissue culture laboratory (glass wares).
	4 th	1.2 Tissue culture laboratory (chemicals).
3 rd	1 st	1.2 Tissue culture laboratory (Equipments, glass wares & chemicals)& sterilization.
	2 nd	1.3 What is Sterilization?
	3 rd	1.3 What is Aseptic condition?
	4 th	1.3 How to maintain Sterilization & Aseptic condition.
4 th	1 st	1.4 Applications of plant tissue culture.
	2 nd	1.4 Applications of plant tissue culture.
	3 rd	1.4 Applications of plant tissue culture.
	4 th	2.1 What is culture media?
5 th	1 st	2.1Types of culture media.
	2 nd	2.1preparation of culture media.
	3 rd	2.2 What is Callus?

	4 th	2.2 Techniques of callus culture.
6 st	1 st	2.2 Different types and nature of Callus.
	2 nd	2.3 What is Protoplast?
	3 rd	2.3 Techniques for Isolation of protoplast.
	4 th	2.3 Techniques for fusion of protoplast.
7 th	1 st	2.3 Culture of protoplast.
	2 nd	2.4 What is Somatic Embryogenesis?
	3 rd	2.4 Protocols for inducing Somatic Embryogenesis.
	4 th	2.4 Importance Somatic Embryogenesis.
8 th	1 st	2.5 What is Single cell culture.
	2 nd	2.5 Methods of Single cell culture.
	3 rd	2.6 What is Embryo culture?
	4 th	2.6 Methods of Embryo culture.
9 th	1 st	2.7 What is Somatic hybridization and Cybridization.
	2 nd	2.7 Methods of Somatic hybridization and Cybridization..
	3 rd	2.7 Importance of Somatic hybridization and Cybridization.
	4 th	3.1 What is Vector?
10 th	1 st	3.1 Vector mediated Gene transfer.
	2 nd	3.1 Method of Vector mediated Gene transfer.
	3 rd	3.1 Method of Vector mediated Gene transfer.
	4 th	3.2 What is Agro bacterium..
11 st	1 st	3.2 Types of Agro bacterium mediated gene transfer methods.
	2 nd	3.2 Types of Agro bacterium mediated gene transfer methods.

	3rd	3.2 Importance of Agro bacterium mediated gene transfer .
	4th	3.3 Ti-plasmid & Ri plasmid
12th	1st	3.3 Ti-plasmid & Ri plasmid
	2nd	3.4 What is transgenic plant
	3rd	3.4 Formation of transgenic plant
	4th	3.4 Importance of transgenic plant.
13th	1st	3.5 Transposon & Transposable elements .
	2nd	3.5 Transposon & Transposable elements ..
	3rd	4.1 Flavor ,Savor (tomato)
	4th	4.1 Flavor ,Savor (tomato)
14th	1st	4.1 Application of Flavor ,Savor (tomato).
	2nd	4.2 What is BT cotton?
	3rd	4.2Technique of BT cotton.
	4th	4.2 Application of BT cotton.
15th	1st	4.3 What is BT Brinjal?
	2nd	4.3 Importance of BT Brinjal
	3rd	4.4What is Gloden Rice?
	4th	4.4Importance of Gloden Rice

