

LESSON PLAN (Session 23-24)

Semester -Odd

Department: INDUSTRIAL MICROBIOLOGY

Class : Bsc III INDUSTRIAL MICROBIOLOGY

Name of the faculty: Ms. PREETI HANDA

Paper code: IMB-501

Nomenclature of the paper: AGRICULTURE MICROBIOLOGY

Month	Week	Topics to be covered
July	21.07.23-22.07.23	Diversity of soil microorganisms. Microbe: microbe interactions.
	24.07.23-31.07.23	Microbe: plant/animal interactions. Soil enzymes properties.
August	01.08.23-05.08.23	Major soil borne diseases of plants and their transmission.
	07.08.23-12.08.23	Fungiassa protrophs and Substrate succession (Hudson, Garrett &Deacon concepts).
	14.08.23-19.08.23	Biodegradation of cellulose, hemicellulose
	21.08.23-26.08.23	lignin and pectin. Class test-1
	28.08.23-31.08.23	Biodegradation of pesticides
September	01.09.23-09.09.23	Bio deterioration of useful products.
	11.09.23-16.09.23	Major types of symptoms, Koch's postulates, mode of infection.
	18.09.23-23.09.23	Classification of plant diseases. Disease cycle and control of following diseases caused by viruses , bacteria. Class test-2
	25.09.23-30.09.23	Fungi(Whiterustofcrucifers,redrotofsugarcane,potatoblighs,citrus canker,bacterialblightofpaddyandtobaccomosaic virus).
October	01.10.23-07-10.23	Principle of biological control.
	09.10.23-14.10.23	Mechanism of action of bio control agents. Sessional exam.

	16.10.23- 21.10.23	Classification and advantages of bio pesticides
	23.10.23- 28.10.23	Major commercial bio pesticides based on fungi.
	30.10.23- 31.10.23	Major commercial bio pesticides based on Bacteria .Class test-3
	02.11.23- 09.11.23	Major commercial bio pesticides based on viruses.
Vacations	10.11.23- 16.11.23	Diwali Vacations

LESSON PLAN (Session 23-24)

Semester -Odd

Class : Bsc III INDUSTRIAL MICROBIOLOGY.

Name of the faculty: Ms. REETU KAMBOJ

Paper code: IMB-502

Nomenclature of the paper: FERMENTATION TECHNOLOGY &IPR

Month	Week	Topics to be covered
July	21.07.23 - 22.07.23	History and Scope of fermentation technology.
	24.07.23- 31.07.23	Industrial Microorganisms: Desirable characteristics and selection of industrial Microorganism,
August	01.08.23- 05.08.23	Isolation of suitable industrial microorganisms from natural habitat.
	07.08.23- 12.08.23	Culture Collection Centres, Strain improvement and maintenance.
	14.08.23- 19.08.23	Biology of industrial Microorganisms. Cell growth, Microbial growth kinetics, factors affecting growth.
	21.08.23- 26.08.23	Basic nutrition ,Class test-1
	28.08.23- 31.08.23	Primary metabolism, Secondary Metabolism, Regulation of Metabolism.
September	01.09.23- 09.09.23	Fermentation Media: Media composition
	11.09.23- 16.09.23	Media sterilization, Contamination.
	18.09.23- 23.09.23	Inoculum media, Media economics, Screening for fermentation media
	25.09.23- 30.09.23	Fermentor design, Class Test-2
October	01.10.23- 07-10.23	Construction of bioreactors, Requirement for a septic operation, Aeration and mixing, Type of fermentors.
	09.10.23- 14.10.23	Instrumentation and control .Sessional exam.
	16.10.23- 21.10.23	Scale up study: Product recovery, scale up of fermentation, Down-stream processing.
	23.10.23	Product development, Regulation and safety.

	28.10.23	
	30.10.23- 31.10.23	Intellectual property and IPR, patent, copyrights, geographical indications, trademarks, trade secret.
	02.11.23- 09.11.23	Industrial designs. Patent law, Legislations covering IPR's in India. Patent able and non-patent able items. Class test-3.
Vacations	10.11.23- 16.11.23	Diwali Vacations