

MAHARANA PRATAP MAHAVIDYALAYA,JUNGLE DHUSAR.GORAKHPUR**LESSON PLAN 2022-23****Course Code: BOT102****Course Title: Microbiology & Plant Pathology****Credits: 4+0**

DATE	LECTURE NO	TEACHER	UNIT	TOPIC
1.08.2022	1	Dr AKG	1A Introduction TO ancient,Vedic and heritage Botany	Introduction to ancient,Vedic and heritage Botany,contribution of Indian Botanists, in context Of holistic development of modern science
3.08.2022	2	Dr AKG	1A Introduction TO ancient,Vedic and heritage Botany	Microscopy – Light, phase contrast, electron, scanning and transmission electron microscopy, staining techniques for light microscopy
4.08.2022	3	Dr AKS	II Microbial world	structure of Eukaryotic and prokaryotic cells, Gram positive and Gram-negative bacteria
5.08.2022	4	Dr AKS	II Microbial world	Bacterial Growth curve, factors affecting growth of microbes;
6.08.2022			Class teaching	
11.08.2022	5	Dr AKG	B. Microbial Techniques & instrumentation	Common equipment of microbiology lab and principle of their working (autoclave, oven, laminar air flow,centrifuge. Colorimetry and spectrophotometry)
13.08.2022	6	Dr AKG	Microbial Techniques & instrumentation	immobilization methods, fermentation and fermenters
16.08.2022	7	Dr AKS	II Microbial world	Structure of a bacteria; Bacterial Chemotaxis
17.08.2022	8	Dr AKS	II Microbial world	measurement of growth; Batch culture, Synchronous growth of microbes;
19.08.2022	9	Dr AKG	III Phycology	Range of thallus organization in Algae Pigments, Reserve food-reproduction- Classification and life cycle of Nostoc,
23.08.2022			Monthly evaluation	
24.08.2022	10	Dr AKS	II Microbial world	Sporulation , reproduction and recombination in bacteria
25.08.2022	11	Dr AKS	II Microbial world	Viruses, general characteristics, viral culture
26.08.2022	12	Dr AKG	III Phycology	Chlorella, Volvox,Hydrodictyon,Oedogonium,
27.08.2022	13	Dr AKS	II Microbial world	Structure of viruses, Bacteriophages, T4 & λ-phage Lytic and Lysogenic cycles
3.09.2022	14	Dr AKG	III Phycology	Chara; Sargassum, Ectocarpus.
5.09.2022			Class teaching	
6.09.2022	15	Dr AKS	II Microbial world	viroid, Prions & mycoplasma& phytoplasma
7.09.2022	16	Dr AKS	II Microbial world	Actinomycetes & plasmids and their economic uses
10.09.2022	17	Dr AKG	III Phycology	Economic importance of algae- Role of algae in soil fertility- biofertilizer – Nitrogen fixation-

				Symbiosis; Commercial products of algae – biofuel, Agar.
15.09.2022	18	Dr AKS	IV Mycology	General characteristics, nutrition of Fungi, life cycle
16.09.2022	19	Dr AKS	IV.Fungi	Economic importance of Classification upto class.
19.09.2022			, Class teaching	
20.09.2022	20	Dr AKG	VII Symptoms, Causal organism, Disease cycle and Control measures of	Brown spot of rice and 'White rust of Crucifers,
21.09.2022	21	Dr AKS	IV.Distinguishing characters of	Myxomycota:.
23.09.2022	22	Dr AKG	VII Diseases and Control	Late Blight of Potato,
26.09.2022	23	Dr AKS	IV.General characters of	Mastigomycotina
27.09.2022	24	Dr AKS	IV. Zygomycota	Zygomycota: Rhizopus,
28.09.2022			Monthly evaluation	
29.09.2022	25	Dr AKG	VII Diseases and Control	False Smut Red Rot of Sugarcane, Wilting of Arhar
30.09.2022	26	Dr AKS	IV. Zygomycota	Ascomycota Saccharomyces, Penicillium, Peziza
10.10.2022	27	Dr AKS	IV.Basidiomycotina	Puccinia, Agaricus;
11.10.2022	28	Dr AKG	VII Diseases and Control	Mosaic diseases on tobacco and cucumber
12.10.2022	29	Dr AKS	IV.Deuteromycotina:	Fusarium, Alternaria.
13.10.2022			Class teaching	
14.10.2022	30	Dr AKS	IV.Fungi,	Heterothallism, Physiological specialization,
18.10.2022	31	Dr AKG	VII Diseases and Control	yellow vein mosaic of bhindi; Citrus Canker
19.10.2022	32	Dr AKG	VII Diseases and Control	Little leaf of brinjal; Damping off of seedlings Quarantine, Chemical, Biological Integrated pest disease management
20.10.2022	33	Dr AKS	IV.Fungi,	Heterokaryosis & Parasexuality
1.11.2022	34	Dr AKS	V.Mushroom Cultivation, Lichenology & Mycorrhiza	Mushroom cultivation lichens, General account of
2.11.2022			Class teaching	
3.11.2022	35	Dr AKG	VIII Applied Microbiology Food	Single cell proteins, Organic farming inputs Microbiology of water, fermentations and food produced by microbes, amino acids, Bacterial biofertilizers, blue green algae, Azolla and mycorrhiza. lichens, reproduction and significance; Mycorrhiza: Ectomycorrhiza, and endomycorrhiza and their significance
5.11.2022	36	Dr AKG	VIII Applied Microbiology Food	antibiotics, enzymes, alcoholic beverages, organic acid. Bioremediation, Production of biofuels, and biodeterioration of materials. Biopesticides- Plant growth promoting

				rhizobacteria &— Trichoderma sp. and Pseudomonas
10.11.2022	37	Dr AKS	VI Plant Pathology	Disease concept, Symptoms, Etiology& causal complex Primary and secondary Inoculum Infection, Pathogenicity and pathogenesis Koch's Postulates.
11.11.2022	38	Dr AKS	VI Plant Pathology	Mechanism of infection (Brief idea about Pre-penetration, Penetration and Post-penetration
12.11.2022	39	Dr AKS	VI Plant Pathology	Disease cycle (monocyclic, polycyclic and polyetic). Defense mechanism with special reference to Phytoalexin Resistance- Systemic acquired and induced
14.11.2022			Monthly evaluation	
15.11.2022	40	Dr AKS	VI Plant Pathology	systemic fungicides- Bordeaux mixture, Lime Sulphur, Tobacco decoction, Neem cake & oil