

DEPARTMENT OF VETERINARY MICROBIOLOGY

APOLLO COLLEGE OF VETERINARY MEDICINE, JAIPUR

(B.V.Sc. & A.H. SECOND YEAR ,2024-2025 batch)

Course title: Veterinary Microbiology

Credit hours: 3+2

(UNIT 1, 2, 3, 4 & 5)

LECTURE SCHEDULE (THEORY)

UNIT I-(GENERAL AND SYSTEMATICBACTERIOLOGY)			
LECTURE NO.	DATE	NAME OF TOPIC	INSTRUCTURE
1.	08/11/2024	Introduction and history of Microbiology	Dr. Navin Kumar Mishra Dr. Alka Galav
2.	19/11/2024	Classification and nomenclature of bacteria	Dr. Navin Kumar Mishra Dr. Alka Galav
3.	23/11/2024	Microscopy and Micrometry and Bacterial stains and techniques	Dr. Navin Kumar Mishra Dr. Alka Galav
4.	25/11/2024	Structure and morphology of bacteria	Dr. Navin Kumar Mishra Dr. Alka Galav
5.	26/11/2024	Growth and nutritional requirement of aerobic and anaerobic bacteria	Dr. Navin Kumar Mishra Dr. Alka Galav
6.	30/11/2024	Normal, opportunistic and saprophytic bacterial flora	Dr. Navin Kumar Mishra Dr. Alka Galav
7.	02/12/2024	Bacterial genetics	Dr. Navin Kumar Mishra Dr. Alka Galav
8.	03/12/2024	<i>Staphylococcus</i>	Dr. Navin Kumar Mishra Dr. Alka Galav

9.	07/12/2024	<i>Streptococcus</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
10.	09/12/2024	<i>Corynebacterium, Trueperella, Rhodococcus</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
11.	10/12/2024	<i>Listeria and Erysipelothrix</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
12.	23/12/2024	<i>Bacillus</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
13.	24/12/2024	<i>Mycobacterium</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
14.	26/12/2024	<i>Clostridium</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
15.	27/12/2024	<i>Clostridium</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
16.	28/12/2024	<i>Actinomyces, Nocardia, Streptomyces and Dermatophilus</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
17.	30/12/2024	Family <i>Enterobacteriaceae</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
18.	31/12/2024	Family <i>Enterobacteriaceae</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
19.	04/01/2025	<i>Pseudomonas and Burkholderia</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
20.	07/01/2025	<i>Pasteurella,</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
21.	13/01/2025	<i>Actinobacillus, Mannheimia</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
22.	18/01/2025	<i>Haemophilus</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
23.	20/01/2025	<i>Brucella</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
24.	21/01/2025	<i>Vibrio; Campylobacter, Bordetella and Moraxella</i>	Dr. Navin Kumar Mishra Dr. Alka Galav

25.	25/01/2025	<i>Gram negative anaerobes: Bacteriodes, Dichlobacteria, Fusobacterium</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
26.	27/01/2025	<i>Leptospira and other Spirochaetes</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
27.	28/01/2025	<i>Mycoplasma,</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
28.	30/01/2025	<i>Coxiella</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
29.	31/01/2025	<i>Neorickettsia, Ehrlichia</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
30.	01/02/2025	<i>Anaplasma, Rickettsia</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
31.	02/02/2025	<i>Chlamydia and Chlamydophila</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
32.	03/02/2025	Emerging, re-emerging and transboundry bacterial pathogens	Dr. Navin Kumar Mishra Dr. Alka Galav
33.	10/02/2025	Introduction, classification , <i>Zygomycetes</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
34.	17/02/2025	General properties of fungi	Dr. Navin Kumar Mishra Dr. Alka Galav
35.	18/02/2025	Growth and Reproduction of fungi	Dr. Navin Kumar Mishra Dr. Alka Galav
36.	22/02/2025	<i>Candida, Cryptococcus,</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
37.	24/02/2025	<i>Aspergillus; Penicillium</i>	Dr. Navin Kumar Mishra Dr. Alka Galav
38.	01/03/2025	Dermatophytes and Malassezia	Dr. Navin Kumar Mishra Dr. Alka Galav
39.	03/03/2025	Dimorphic fungi	Dr. Navin Kumar Mishra Dr. Alka Galav
40.	04/03/2025	<i>Rhinosporidium, Sporotrichum, Mycetoma and Zygomycetes</i>	Dr. Navin Kumar Mishra Dr. Alka Galav

41.	10/03/2025	Mycotic mastitis and mycotic abortion;	Dr. Navin Kumar Mishra Dr. Alka Galav
42.	11/03/2025	Mycotoxicoeses	Dr. Navin Kumar Mishra Dr. Alka Galav
43.	17/03/2025	Basic concepts and scope of Recombinant DNA technology	Dr. Navin Kumar Mishra Dr. Alka Galav
44.	18/03/2025	Gene cloning	Dr. Navin Kumar Mishra Dr. Alka Galav
45.	22/03/2025	Cloning vectors , expression vectors	Dr. Navin Kumar Mishra Dr. Alka Galav
46.	24/03/2025	Transformation	Dr. Navin Kumar Mishra Dr. Alka Galav
47.	25/03/2025	Transfection	Dr. Navin Kumar Mishra Dr. Alka Galav
48.	28/03/2025	Southern	Dr. Navin Kumar Mishra Dr. Alka Galav
49.	29/03/2025	Northern and Western blotting	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
50.	01/04/2025	Gene banks; Application of molecular and biotechnological techniques:	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
51.	05/04/2025	Polymerase chain reaction	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
52.	07/04/2025	Nucleic acid hybridization, DNA library,	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
53.	08/04/2025	DNasequencing	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
54.	15/04/2025	DNA fingerprinting	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh

55.	19/04/2025	IPR. Ethics and regulatory issues in Animal Biotechnology	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
56.	21/04/2025	History of Immunology	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
57.	22/04/2025	Lymphoid organs,	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
58.	28/04/2025	Lymphoid tissues and Cells	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
59.	03/05/2025	Types of Immunity	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
60.	05/05/2025	Antigens, hapten, epitope, Specificity, T dependent and T independent Antigens	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
61.	06/05/2025	Heterophile Antigens, cross reacting Antigens, blood group Antigens	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
62.	12/05/2025	Mitogens and factors affecting immunogenicity; Adjuvants	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
63.	13/05/2025	Antibody: Structure, physiochemical properties, : functions of various classes of immunoglobulins	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
64.	17/05/2025	Theories of antibody production	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
65.	19/05/2025	Hybridoma and monoclonal antibodies	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
66.	20/05/2025	Serological reactions	Dr. Navin Kumar Mishra Dr. Alka Galav

			Dr.Yaduveer Singh
67.	24/05/2025	Serological reactions	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
68.	25/05/2025	Major histocompatibility complex (MHC) structure, function and gene organization	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
69.	27/05/2025	Structure of BCR	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
70.	31/05/2025	Structure of TCR	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
71.	02/06/2025	Antigen processing and presentation	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
72.	03/06/2025	Complement system: activation pathways and biological consequences	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
73.	09/06/2025	Complement system: activation pathways and biological consequences	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
74.	10/06/2025	Cytokines: general properties, major types and function	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
75.	13/06/2025	Hypersensitivity: classification and mechanism of induction	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
76.	19/06/2025	Hypersensitivity: classification and mechanism of induction	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
77.	20/06/2025	Autoimmunity; Immunotolerance	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
78.	21/06/2025	Concept of Immunity to Microbes	Dr. Navin Kumar Mishra

			Dr. Alka Galav Dr.Yaduveer Singh
79.	26/06/2025	Vaccines and other biologicals	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
80.	27/06/2025	History of Virology; Introduction to viruses	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
81.	28/06/2025	Structure of Viruses	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
82.	01/07/2025	Classification of Viruses	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
83.	05/07/2025	Viral Replication	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
84.	07/07/2025	Genetic and Non-genetic viral interactions; Virus-Cell Interactions	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
85.	08/07/2025	Viral Pathogenesis, Oncogenesis, latency and immunopathology	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
86.	14/07/2025	Studies on General Properties, Antigens, Cultivation, Pathogenesis, Epidemiology, Clinical Signs, Diagnosis, Prevention and Control of following Viruses and Prions Causing Diseases in Livestock and Poultry: <i>Birnaviridae</i> : Infectious bursal disease virus; <i>Reoviridae</i> : Rotaviruses,	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
87.	15/07/2025	<i>Reoviridae</i> : Bluetongue virus, African horse sickness virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
88.	19/07/2025	<i>Paramyxoviridae</i> : Newcastle disease virus, Canine distemper virus, PPR virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh

89.	21/07/2025	<i>Paramyxoviridae</i> : Newcastle disease virus, Canine distemper virus, PPR virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
90.	26/07/2025	<i>Rhabdoviridae</i> : Rabies virus, Ephemeral fever virus, <i>Bornaviridae</i> : Borna virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
91.	28/07/2025	<i>Rhabdoviridae</i> : Rabies virus, Ephemeral fever virus, <i>Bornaviridae</i> : Borna virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
92.	29/07/2025	<i>Orthomyxoviridae</i> : Swine, Equine, Avian Influenza Viruses	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
93.	04/08/2025	<i>Orthomyxoviridae</i> : Swine, Equine, Avian Influenza Viruses	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
94.	05/08/2025	<i>Coronaviridae</i> : Infectious Bronchitis virus, Transmissible gastroenteritis virus; <i>Arteriviridae</i> : Equine viral arteritis virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
95.	11/08/2025	<i>Picornaviridae</i> : FMD virus, Duck viral hepatitis virus; <i>Caliciviridae</i> : Feline calicivirus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
96.	12/08/2025	<i>Picornaviridae</i> : FMD virus, Duck viral hepatitis virus; <i>Caliciviridae</i> : Feline calicivirus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
97.	19/08/2025	<i>Togaviridae</i> : Equine encephalomyelitis viruses; <i>Flaviviridae</i> : Swine fever virus, BVD virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
98.	23/08/2025	<i>Retroviridae</i> : Visna or maedi virus, Equine infectious anemia virus, Lymphoid leucosis virus, Bovine leukemia virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
99.	25/08/2025	<i>Retroviridae</i> : Visna or maedi virus, Equine infectious anemia virus, Lymphoid leucosis virus, Bovine leukemia virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr. Yaduveer Singh
100.	26/08/2025	<i>Poxviridae</i> : Capripoxvirus, Avipoxvirus, Cowpoxvirus	Dr. Navin Kumar Mishra Dr. Alka Galav

			Dr.Yaduveer Singh
101.	30/08/2025	<i>Asfarviridae</i> : African Swine Fever Virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
102.	01/09/2025	<i>Herpesviridae</i> : Bovine herpes viruses, Equine Herpes viruses, Infectious laryngotracheitis virus, Marek's disease virus, Pseudorabies virus, Malignant Catarrhal Fever virus; Duck Plague virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
103.	06/09/2025	<i>Herpesviridae</i> : Bovine herpes viruses, Equine Herpes viruses, Infectious laryngotracheitis virus, Marek's disease virus, Pseudorabies virus, Malignant Catarrhal Fever virus; Duck Plague virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
104.	08/09/2025	<i>Adenoviridae</i> : Infectious Canine Hepatitis virus, Egg Drop Syndrome virus, Fowl adenovirus, <i>Papillomaviridae</i> : Papillomatosis	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
105.	09/09/2025	<i>Parvoviridae</i> : Canine parvoviruses, Feline panleucopenia virus <i>Circoviridae</i> : Chicken Anemia Virus	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
106.	15/09/2025	Prions: Scrapie, Bovine Spongiform Encephalopathy	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
107.	15/09/2025	Emerging, re-emerging and transboundry viruses and Viral Infections	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh

Department : Department of Veterinary Microbiology

Course title :Veterinary Microbiology

Credit Hours:3+2

PRACTICAL

PRACTICAL NO	Experiment	Date				Course teacher
UNIT- I		Batch A	Batch B	Batch C	Batch D	Dr. Navin Kumar Mishra Dr. Alka Galav
1	General laboratory instructions	18/11/2024	19/11/2024	20/11/2024	20/11/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
2	Equipments	18/11/2024	19/11/2024	20/11/2024	20/11/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
3	The microscope	18/11/2024	19/11/2024	20/11/2024	20/11/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
4	Sterilization	22/11/2024	23/11/2024	21/11/2024	21/11/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
5	Methods of proper collection and transport of the microbiological materials for disease diagnosis	25/11/2024	26/11/2024	27/11/2024	27/11/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
6	Bacteriological sample submission guidelines	25/11/2024	26/11/2024	27/11/2024	27/11/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
7	Preparation of culture media for cultivation of aerobic and anaerobic bacteria	29/11/2024	29/11/2024	29/11/2024	28/11/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
8	Aseptic technique of inoculation and cultivation	02/12/2024	03/12/2024	04/12/2024	04/12/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
9	Cultural characterization of bacteria	06/12/2024	07/12/2024	05/12/2024	07/12/2024	Dr. Navin Kumar Mishra Dr. Alka

						Galav
10	Preparation of bacterial film or smear	07/12/2024	10/12/2024	11/12/2024	11/12/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
11	Stains and staining methods	09/12/2024	24/12/2024	12/12/2024	12/12/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
12	Compound stains	09/12/2024	24/12/2024	12/12/2024	12/12/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
13	Selective or differential staining	13/12/2024	26/12/2024	26/12/2024	26/12/2024	Dr. Navin Kumar Mishra Dr. Alka Galav
14	Acid fast staining	23/12/2024	28/12/2024	01/01/2025	01/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
15	Special staining	27/12/2024	31/12/2024	02/01/2025	02/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
16	Staining of milk smear	30/12/2024	04/01/2025	08/01/2025	08/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
17	Motility if bacteria	03/01/2025	07/01/2025	09/01/2025	09/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
18	Biochemical characterization of bacteria	10/01/2025	10/01/2025	15/01/2025	15/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
19	Antibiotic susceptibility test (Antibiogram)	12/01/2025	16/01/2025	16/01/2025	17/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
20	Characterization of staphylococcus spp.	16/01/2025	18/01/2025	22/01/2025	20/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
21	Characterization of streptococcus spp.	17/01/2025	21/01/2025	23/01/2025	22/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
22	characterization of bacillus spp.	20/01/2025	22/01/2025	23/01/2025	23/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
23	Characterization of brucella spp.	21/01/2025	25/01/2025	03/02/2025	29/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
24	Characterization of clostridium chauvoei	24/01/2025	27/01/2025	19/02/2025	30/01/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
25	Characterization Of clostridium perfringens	27/01/2025	28/01/2025	20/02/2025	20/02/2025	Dr. Navin Kumar Mishra Dr. Alka Galav

26	Characterization of pasteurellaspp.	28/01/2025	29/01/2025	27/02/2025	27/02/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
27	Characterization of mastitis causing pathogens	03/02/2025	03/02/2025	05/03/2025	05/03/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
28	Characterization of mycobacterium spp.	17/02/2025	18/02/2025	06/03/2025	06/03/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
29	Characterization Enterobacteriaceae spp.	21/02/2025	22/02/2025	13/03/2025	13/03/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
30	Characterization Of Actinomyces&Actinobacillus spp.	24/02/2025	25/02/2025	19/03/2025	19/03/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
31	Characterization of leptospira spp.	03/03/2025	01/03/2025	20/03/2025	20/03/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
32	Characterization of mycoplasma spp.	10/03/2025	04/03/2025	26/03/2025	26/03/2025	Dr. Navin Kumar Mishra Dr. Alka Galav
33	Characterization Of pseudomonas spp.	17/03/2025	11/03/2025	27/03/2025	27/03/2025	Dr. Navin Kumar Mishra Dr. Alka Galav

UNIT- II

1	Collection transportation processing of samples and preparation of media for isolation of fungi	24/03/2025	18/03/2025	02/04/2025	02/04/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
2	Cultivation slide culture technique cultural characteristics and antifungal sensitivity testing of fungi	28/03/2025	22/03/2025	03/04/2025	03/04/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
3	KOH mount lactophenol cotton blue staining of moulds and dermatophytes	04/04/2025	25/03/2025	09/04/2025	09/04/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
4	Diagnosis of aspercrgilosis and candidiasis	07/04/2025	29/03/2025	16/04/2025	16/04/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
5	Demonstration of other important yeasts	21/04/2025	01/04/2025	17/04/2025	17/04/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer

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UNIT -III						
1	Isolation of DNA	25/04/2025	05/04/2025	23/04/2025	23/04/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
2	Isolation of RNA	28/04/2025	08/04/2025	24/04/2025	24/04/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
3	Restriction enzyme analysis	02/05/2025	15/04/2025	07/05/2025	01/05/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
4	Polymerase chain reaction (PCR)	12/05/2025	22/04/2025	12/05/2025	02/05/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
5	Agarose gel electrophoresis	16/05/2025	25/04/2025	14/05/2025	14/05/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
6	DNA sequencing dideoxy method	19/05/2025	03/05/2025	19/05/2025	15/05/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
7	Electrophoresis of proteins	26/05/2025	13/05/2025	21/05/2025	21/05/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
UNIT -IV						
1	Preparation of antigen	30/05/2025	17/05/2025	26/05/2025	22/05/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
2	Raising of antisera	02/06/2025	20/05/2025	28/05/2025	28/05/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
3	Purification of immunoglobulin from serum	06/06/2025	24/05/2025	02/06/2025	04/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
4	Agglutination test	09/06/2025	27/05/2025	04/06/2025	05/062025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh

5	Viral Haemagglutination test	13/06/2025	31/05/2025	11/06/2025	11/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
6	Viral HaemagglutinationInhibition test	13/06/2025	31/05/2025	11/06/2025	11/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
7	Passive haemagglutination test	13/06/2025	31/05/2025	11/06/2025	11/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
8	Precipitation test	16/06/2025	03/06/2025	16/06/2025	12/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
9	Immunoelectrophoresis	20/06/2025	10/06/2025	18/06/2025	18/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
10	Counter immunoelectrophoresis	23/06/2025	17/06/2025	23/06/2025	19/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
11	Complement fixation test	27/06/2025	21/06/2025	25/06/2025	25/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
12	Immunofluorescence test	30/06/2025	24/06/2025	30/06/2025	26/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
13	ELISA	04/07/2025	18/06/2025	02/07/2025	02/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
14	Assay of cell mediated immune response	07/07/2025	01/07/2025	03/07/2025	03/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh

UNIT- V

1	Establishment of virological laboratory	11/07/2025	05/07/2025	09/07/2025	09/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
2	Collection preservation and dispatch of sample	11/07/2025	05/07/2025	09/07/2025	09/07/2025	Dr. Navin Kumar Mishra Dr. Alka

						Galav Dr.Yaduveer Singh
3	Glasswares and Equipments	14/07/2025	08/07/2025	10/07/2025	10/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
4	Washing	14/07/2025	08/07/2025	10/07/2025	10/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
5	Filters and filtrations	18/07/2025	15/07/2025	16/07/2025	16/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
6	Preparation of solutions	21/07/2025	19/07/2025	17/07/2025	17/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
7	Preparation of inoculums	21/07/2025	19/07/2025	17/07/2025	17/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
8	Routes of inoculation of embryonated eggs	04/08/2025	22/07/2025	23/07/2025	23/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
9	Collection of specimens from	08/08/2025	05/08/2025	24/07/2025	24/07/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
10	Preparation of media	11/08/2025	12/08/2025	06/08/2025	06/08/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
11	Chicken embryo fibroblast culture	18/08/2025	19/08/2025	07/08/2025	07/08/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
12	Chicken kidney cell culture	25/08/2025	26/08/2025	13/08/2025	13/08/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
13	Titration of virus	29/08/2025	30/08/2025	14/08/2025	14/08/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
14	Haemagglutination	13/06/2025	31/05/2025	11/06/2025	11/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh

15	Haemagglutination inhibition test	13/06/2025	31/05/2025	11/06/2025	11/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
16	Precipitation test	16/06/2025	03/06/2025	16/06/2025	12/06/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
17	Neutralization of virus	01/09/2025	06/09/2025	20/08/2025	20/08/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
18	Measurement of virus infectivity	01/09/2025	06/09/2025	20/08/2025	20/08/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
19	Cell count	08/09/2025	09/09/2025	21/08/2025	21/08/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh
20	Application of cell culture	08/09/2025	09/09/2025	21/08/2025	21/08/2025	Dr. Navin Kumar Mishra Dr. Alka Galav Dr.Yaduveer Singh