

Vivekanand College (Autonomous)
Department Of Microbiology
Syllabus completion report 2022 - 2023

Sr.No	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
1	<p>B.Sc.I Sem I Paper II DSC 1010 A: Basic techniques in Microbiology Unit I :</p> <p>A. General Principles of Microscopy :</p> <p>1. Types of microscopes:</p> <p>B. Stains and Staining procedures</p> <p>1. Definition of dye and stain 2. Classification of stains . 3. Principles, Procedure, Mechanism of staining procedures</p> <p>a) Monochrome staining b) Negative staining c) Differential staining :</p> <p>4. Special staining methods</p> <p>Practical Course : I</p> <p>3. Study of Laboratory instruments used in the microbiology laboratory:</p> <p>a)Laminar air flow, b) autoclave, incubator c)hot air oven d) colorimeter, e)colony counter f)bacteriological filter assembly</p> <p>4. Study of compound microscope. 5. Microscopic observation of bacteria: c)Gram's staining,</p>	<p>B.Sc.I Sem I Paper II DSC 1010 A: Basic techniques in Microbiology Unit I :</p> <p>A. General Principles of Microscopy :</p> <p>1. Types of microscopes:</p> <p>B. Stains and Staining procedures</p> <p>1. Definition of dye and stain 2. Classification of stains . 3. Principles, Procedure, Mechanism of staining procedures</p> <p>a) Monochrome staining b) Negative staining c) Differential staining :</p> <p>4. Special staining methods</p> <p>Practical Course : I</p> <p>3. Study of Laboratory instruments used in the microbiology laboratory:</p> <p>a)Laminar air flow, b) autoclave, incubator c)hot air oven d) colorimeter, e)colony counter f)bacteriological filter assembly</p> <p>4. Study of compound microscope. 5. Microscopic observation of bacteria: c)Gram's staining.</p>	NIL

Name of Teacher – Ms.V.V.Misal

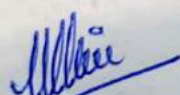
Dr. G. K. Sontakke
OK



Dr. G. K. Sontakke
Dr.G.K. Sontakke
Incharge Head
Department Of Microbiology
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Sr.No	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
1	<p>B.Sc.II Sem III Paper V DSC 1010 C: Microbial Physiology and Metabolism Unit II :</p> <p>A] Catabolism of glucose – EMP, HMP, ED and TCA cycle.</p> <p>B] Fermentation: - Homolactic & Heterolactic fermentation</p>	<p>B.Sc.II Sem III Paper V DSC 1010 C: Microbial Physiology and Metabolism Unit II :</p> <p>A] Catabolism of glucose – EMP, HMP, ED and TCA cycle.</p> <p>B] Fermentation: - Homolactic & Heterolactic fermentation</p>	NIL
2	<p>C] Bacterial electron transport chain – Components, flow of electrons & mechanism of ATP generation – Chemiosmotic hypothesis. Practical – 1. Micrometry. 2. Amino acid decarboxylation test 3. Amino acid deamination test 4. Hugh and Leifson's test</p>	<p>C] Bacterial electron transport chain – Components, flow of electrons & mechanism of ATP generation – Chemiosmotic hypothesis. Practical – 1. Micrometry. 2. Amino acid decarboxylation test 3. Amino acid deamination test 4. Hugh and Leifson's test</p>	

Signature of Teacher



Name of Teacher – Ms. V.V. Misal



Signature of H.O.D



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Sr.No	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
2	<p>B.Sc III Sem V Paper V DSE 1010 EL Immunology and Medical Microbiology SEC- I Unit I 1.Cells of Immune system – 2. Membrane receptors for antigen and their role in antigen recognition 3. Molecular mechanism of antibody production. 4. Cytokines - 5. Immunological tolerance : 6. Interferon – Unit – II 1. Complement – 2.Monoclonal antibodies - 3.New diagnostic techniques :- 4. Hypersensitivity – 5 . Autoimmune disease : Practical –I IMMUNOLOGY AND MEDICAL MICROBIOLOGY 1. Isolation of - a. <i>Pseudomonas aeruginosa</i> b <i>Klebsiella pneumoniae</i> c. <i>Candida albicans</i> 2. Determination of MIC of streptomycin</p>	<p>B.Sc III Sem V Paper V DSE 1010 EL Immunology and Medical Microbiology SEC- I Unit I 1.Cells of Immune system – 2. Membrane receptors for antigen and their role in antigen recognition 3. Molecular mechanism of antibody production. 4. Cytokines - 5. Immunological tolerance : 6. Interferon – Unit – II 1. Complement – 2.Monoclonal antibodies - 3.New diagnostic techniques :- 4. Hypersensitivity – 5 . Autoimmune disease : Practical –I IMMUNOLOGY AND MEDICAL MICROBIOLOGY 1. Isolation of - a. <i>Pseudomonas aeruginosa</i> b <i>Klebsiella pneumoniae</i> c. <i>Candida albicans</i> 2. Determination of MIC of streptomycin</p>	NIL

Name of Teacher – Ms.V.V.Misal



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Sem I


Vivekanand College, Kolhapur (Autonomous)

Department Of Microbiology


Syllabus completion report 2022 - 2023

Name of Teacher – Mr. S. D. Gabale

Sr. No.	Theory/ Practical	Syllabus Allotted	Syllabus completed	Remaining syllabus
1.	Theory	B. Sc. I Paper I- History and Milestones in Microbiology UNIT I A. History and Milestones in Microbiology i. Spontaneous generation vs biogenesis ii. Contributions of scientists iii. Classification of microorganisms iv. Taxonomic ranks v. Beneficial and harmful activities of microorganisms B. Scope of Microbiology C. Bacterial systematics	B. Sc. I Paper I- History and Milestones in Microbiology UNIT I A. History and Milestones in Microbiology i. Spontaneous generation vs biogenesis ii. Contributions of scientists iii. Classification of microorganisms iv. Taxonomic ranks v. Beneficial and harmful activities of microorganisms B. Scope of Microbiology C. Bacterial systematics	Nil
	Practicals	As per syllabus	As per syllabus	Nil


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
Syllabus completion report 2022 - 2023

Name of Teacher – Mr. S. D. Gabale

Sr. No.	Theory/ Practical	Syllabus Allotted	Syllabus completed	Remaining syllabus
3.	Theory	<p>B.Sc. II Paper VI Industrial and Applied Microbiology Unit II Applied Microbiology, Biostatistics and Bioinformatics</p> <p>1) Air Microbiology 2) Bioinstrumentation i. Electrophoresis ii. U.V. Visible spectrophotometer 3) Biostatistics i. Introduction ii. Data presentation iii. Central tendency iv. Applications 4) Bioinformatics</p>	<p>B.Sc. II Paper VI Industrial and Applied Microbiology Unit II Applied Microbiology, Biostatistics and Bioinformatics</p> <p>1) Air Microbiology 2) Bioinstrumentation i. Electrophoresis ii. U.V. Visible spectrophotometer 3) Biostatistics i. Introduction ii. Data presentation iii. Central tendency iv. Applications 4) Bioinformatics</p>	Nil
	Practicals	As per syllabus	As per syllabus	Nil



 Mr. S. D. Gabale





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Sr. No.	Theory/ Practical	Syllabus Allotted	Syllabus completed	Remaining syllabus
3.	Theory	B.Sc. III Paper V Section II Medical Microbiology Unit I 1. <i>Mycobacterium leprae</i> 2. <i>Clostridium perfringens</i> 3. <i>Treponema pallidum</i> 4. <i>Pseudomonas aeruginosa</i> 5. <i>Vibrio cholera</i> 6. <i>Leptospira interrogans</i> 7. <i>Helicobacter pylori</i> Unit II A. 1. <i>Plasmodium falciparum</i>	B.Sc. III Paper V Section II Medical Microbiology Unit I 1. <i>Mycobacterium leprae</i> 2. <i>Clostridium perfringens</i> 3. <i>Treponema pallidum</i> 4. <i>Pseudomonas aeruginosa</i> 5. <i>Vibrio cholera</i> 6. <i>Leptospira interrogans</i> 7. <i>Helicobacter pylori</i> Unit II A. 1. <i>Plasmodium falciparum</i>	Nil


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Name of Teacher – Mr. S. D. Gabale

		2. Hepatitis A and B virus 3. Rabies virus 4. Dengue virus 5. SARS virus B. Chemotherapy C. Gene therapy D. Immunoprophylaxis	2. Hepatitis A and B virus 3. Rabies virus 4. Dengue virus 5. SARS virus B. Chemotherapy C. Gene therapy D. Immunoprophylaxis	
	Practicals	1. Isolation of Auxotrophic mutants 2. Isolation of streptomycin resistant mutants of <i>E.coli</i> 3. Isolation of Chromosomal DNA	1. Isolation of Auxotrophic mutants 2. Isolation of streptomycin resistant mutants of <i>E.coli</i> 3. Isolation of Chromosomal DNA	Nil

Mr. S. D. Gabale




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Name of Teacher – S.A Pise

Sr.No	Theory / Practical	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
1	Theory	<p>B. Sc I Sem I</p> <p>Types of Microorganisms: 1.General characteristics of different groups: a) Acellular microorganisms-Viruses, Viroids, Prions b) Cellular microorganisms c) Structure of Prokaryotic&eukaryotic cell. d) Difference between prokaryotic and eukaryotic microorganisms.</p> <p>Bacterial Cell organization 1 . Cell size, shape and arrangement, 2. Cytology of Bacteria Structure and Function of 3. Reserve food materials</p>	<p>B. Sc I Sem I</p> <p>Types of Microorganisms: 1.General characteristics of different groups a) Acellular microorganisms-Viruses, Viroids, Prions b) Cellular microorganisms c) Structure of Prokaryotic & eukaryotic cell. d) Difference between prokaryotic & eukaryotic microorganisms.</p> <p>Bacterial Cell organization 1 . Cell size, shape and arrangement, 2. Cytology of Bacteria Structure and Function of 3. Reserve food materials</p>	Nil
	Practical	As per Syllabus	As per Syllabus	Nil

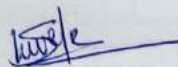

Ms.S.A.Pise




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Name of Teacher – S.A Pise

2	Theory	<p>B.Sc II SemIII</p> <p>Paper III Microbial Physiology & Metabolism</p> <p>A] Growth : Growth phases, measurement of growth, continuous growth, synchronous growth and diauxic growth</p> <p>B] Effect of environmental factors on microbial growth :</p> <p> i) Temperature: -</p> <p> ii)pH</p> <p> iii)Osmotic pressure –Heavy metals</p> <p> iv) Radiations - U. V rays</p> <p>C] Transport across cell membrane</p>	<p>B.Sc II SemIII</p> <p>Paper III Microbial Physiology & Metabolism</p> <p>A] Growth : Growth phases, measurement of growth, continuous growth, synchronous growth and diauxic growth</p> <p>B] Effect of environmental factors on microbial growth :</p> <p> i) Temperature: -</p> <p> ii)pH</p> <p> iii)Osmotic pressure –Heavy metals</p> <p> iv) Radiations - U. V rays</p> <p>C] Transport across cell membrane</p>	Nil
	Practical	As per Syllabus	As per Syllabus	Nil

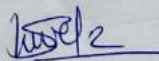

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Name of Teacher – S.A Pise

3	Theory	<p>B.Sc III Sem V Paper VI Section II 1. Enzymes -a.Definition, properties, structure, specificity, classification and mechanism of action b.Allosteric enzymes c.Ribozymes d.Isozymes e. Factors affecting catalytic efficiency of enzymes f.Enzyme kinetics g. Regulation of enzyme synthesis. 2. Extraction & purification of enzymes. 3. Assay of enzymes - Based on substrate and product estimation. 4. Immobilization of enzymes - Methods & applications 5. Confirmation of purified enzymes <u>Unit II</u> 1. Basic concepts of-a.Glyoxylate bypass,b. Phosphoketolase pathway, c.Bioluminescence–</p>	<p>B.Sc III Sem V Paper VI Section II 1. Enzymes -a.Definition, properties, structure, specificity, classification and mechanism of action b.Allosteric enzymes c.Ribozymes d.Isozymes e. Factors affecting catalytic efficiency of enzymes f.Enzyme kinetics g. Regulation of enzyme synthesis. 2. Extraction & purification of enzymes. 3. Assay of enzymes - Based on substrate and product estimation. 4. Immobilization of enzymes - Methods & applications 5. Confirmation of purified enzymes <u>Unit II</u> 1. Basic concepts of-a.Glyoxylate bypass,b.</p>	Nil
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 Ms.S.A.Pise




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Vivekanand College Kolhapur (Autonomous),
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 Syllabus completion report 2022 – 2023

Name of the teacher: T.K.Ulhalkar

Sr.No	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
1	<p>B.Sc I Sem I</p> <p>1. Microbial Nutrition</p> <p>A) Nutritional requirements of microorganisms:</p> <p>B) Nutritional types of microorganism based on carbon and energy sources</p> <p>2. Culture media:</p> <p>3. Cultivation of microorganisms</p> <p><u>Practicals</u> – As per syllabus</p>	<p>B.Sc I Sem I</p> <p>1. Microbial Nutrition</p> <p>A) Nutritional requirements of microorganisms:</p> <p>B) Nutritional types of microorganism based on carbon and energy sources</p> <p>2. Culture media:</p> <p>3. Cultivation of microorganisms</p> <p><u>Practicals</u> – As per syllabus</p>	NIL
2	<p>B.Sc II Sem II</p> <p>A] Growth : Growth phases, measurement of growth, continuous growth, synchronous growth and diauxic growth</p> <p>B] Effect of environmental factors on microbial growth c. Transport across the cell membrane</p> <p><u>Practicals</u> – As per syllabus</p>	<p>B.Sc II Sem II</p> <p>A] Growth : Growth phases, measurement of growth, continuous growth, synchronous growth and diauxic growth</p> <p>B] Effect of environmental factors on microbial growth c. Transport across the cell membrane</p> <p><u>Practicals</u> – As per syllabus</p>	NIL

T.K. Ulhalkar

Signature of Teacher



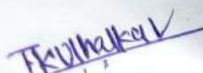
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Signature of H.O.D
 HEAD
 DEPARTMENT OF MICROBIOLOGY
 VIVEKANAND COLLEGE, KOLHAPUR
 (AUTONOMOUS)


Vivekanand College Kolhapur (Autonomous),
Department Of Microbiology
Syllabus completion report 2022 – 2023

Name of the teacher: T.K.Ulhalkar

3	B.Sc III Sem V 1 .Food & Industrial Microbiology Unit 1 Unit 2 Practicals – 1 Estimation of amylase by DNSA method 2.SPC of tomato sauce 3.MPN 4.DMC 5.Estimation & production of citric acid	B.Sc III Sem V 1 .Food & Industrial Microbiology Unit 1 Unit 2 Practicals – 1 Estimation of amylase by DNSA method 2.SPC of tomato sauce 3.MPN 4.DMC 5.Estimation & production of citric acid	Nil
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Signature of Teacher




Signature of H.O.D
HEAD
DEPARTMENT OF MICROBIOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)

Vivekanand College (Autonomous),
Department Of Microbiology
Syllabus completion report 2022 - 2023

Sr.No	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
1	B.Sc.I Sem II Paper IV DSC 1010 B: Applied Microbiology Unit II : A. Enrichment and Isolation of Microorganisms from natural environment. 2.Isolation and cultivation of anaerobic organisms by using media components and by exclusion of air. B. Preservation of microbial cultures. C. Systematic study of pure cultures: 3.Biochemical Characteristics - 4. Serological characters D Concept of Culture collection centres.	B.Sc.I Sem II Paper IV DSC 1010 B: Applied Microbiology Unit II : A. Enrichment and Isolation of Microorganisms from natural environment. 2.Isolation and cultivation of anaerobic organisms by using media components and by exclusion of air. B. Preservation of microbial cultures. C. Systematic study of pure cultures: 3.Biochemical Characteristics - 4. Serological characters D Concept of Culture collection centres.	NIL
2	Practical – 1. MBRT 2. SPC of soil 3. Serial dilution technique 4. SPC of Milk	Practical – 1. MBRT 2. SPC of soil 3. Serial dilution technique 4. SPC of Milk	

Name of Teacher – Ms.V.V.Misal



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Sr.No	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
1	B.Sc.II Sem IV Paper VII DSC 1010 D: Microbial Genetics and Molecular Biology A) Basic concepts of genetics – ii)Forms of DNA iii) Genetic code – iv) Organization of Chromosomal DNA in <i>E.coli</i> . B) Mutation: - i) Basic Concepts of Mutation ii) Spontaneous mutation – Definition and basic concepts. iii) Induced mutations – iv) Mutagens that distort DNA –	B.Sc.II Sem IV Paper VII DSC 1010 D: Microbial Genetics and Molecular Biology A) Basic concepts of genetics – ii)Forms of DNA iii) Genetic code – iv) Organization of Chromosomal DNA in <i>E.coli</i> . B) Mutation: - i) Basic Concepts of Mutation ii) Spontaneous mutation – Definition and basic concepts. iii) Induced mutations – iv) Mutagens that distort DNA – Practical – 1. Effect of Salt 2. Effect of pH 3. Widal test 4. Diauxic growth curve	NIL
2	Practical – 1. Effect of Salt 2. Effect of pH 3. Widal test 4. Diauxic growth curve		

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Name of Teacher – Ms.V.V.Misal




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Sr.No	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
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2	Practical – 1. Effect of Salt 2. Effect of pH 3. Widal test 4. Diauxic growth curve		


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**Vivekanand College (Autonomous),
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Sr.No	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
1	<p>B.Sc.III Sem VI Paper VII DSE 1010 F I: Immunology and Medical Microbiology SEC- I Unit I</p> <ol style="list-style-type: none"> 1. One cistron - one polypeptide hypothesis. 2. Molecular mechanism of gene expression 3. Mutations 4. Methods of isolation and detection of mutants 	<p>B.Sc.III Sem VI Paper VII DSE 1010 F I: Immunology and Medical Microbiology SEC- I Unit I</p> <ol style="list-style-type: none"> 1. One cistron - one polypeptide hypothesis. 2. Molecular mechanism of gene expression 3. Mutations 4. Methods of isolation and detection of mutants 	NIL
2	<p>Unit – II</p> <ol style="list-style-type: none"> 1.Genetic complementation - Cis-trans test 2.Extrachromosomal inheritance: 3.Techniques in Molecular Biology – 4. Genetic engineering <p>b. Tools of genetic engineering – c.Techniques – d. Application of genetic engineering .</p> <p>Practical –I IMMUNOLOGY AND MEDICAL MICROBIOLOGY</p> <ol style="list-style-type: none"> 1. Determination of sensitivity of common pathogens to antibiotics by paper disc method. 2. Serological tests : a. Widal test - Quantitative 3. Haematology : a. Estimation of haemoglobin by Sahli's method. d. Total and differential blood cells count. 4. Urine analysis b. Test for protein (Acetic acid test) c. Test for ketone bodies (Rothra's test) d. Test for bile salt. 	<p>Unit – II</p> <ol style="list-style-type: none"> 1.Genetic complementation - Cis-trans test 2.Extrachromosomal inheritance: 3.Techniques in Molecular Biology – 4. Genetic engineering <p>b. Tools of genetic engineering – c.Techniques – d. Application of genetic engineering .</p> <p>Practical –I IMMUNOLOGY AND MEDICAL MICROBIOLOGY</p> <ol style="list-style-type: none"> 1. Determination of sensitivity of common pathogens to antibiotics by paper disc method. 2. Serological tests : a. Widal test - Quantitative 3. Haematology : a. Estimation of haemoglobin by Sahli's method. d. Total and differential blood cells count. 4. Urine analysis b. Test for protein (Acetic acid test) c. Test for ketone bodies (Rothra's test) d. Test for bile salt 	

Name of Teacher – Ms.V.V.Misal




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2	<p>Unit – II 1. Complement – 2.Monoclonal antibodies - 3.New diagnostic techniques :- 4. Hypersensitivity – 5 . Autoimmune disease : Practical –I IMMUNOLOGY AND MEDICAL MICROBIOLOGY 1. Isolation of - a. <i>Pseudomonas aeruginosa</i> b <i>Klebsiella pneumoniae</i> c. <i>Candida albicans</i> 2. Determination of MIC of streptomycin</p>	<p>Unit – II 1. Complement – 2.Monoclonal antibodies - 3.New diagnostic techniques :- 4. Hypersensitivity – 5 . Autoimmune disease : Practical –I IMMUNOLOGY AND MEDICAL MICROBIOLOGY 1. Isolation of - a. <i>Pseudomonas aeruginosa</i> b <i>Klebsiella pneumoniae</i> c. <i>Candida albicans</i> 2. Determination of MIC of streptomycin</p>	

Name of Teacher – Ms.V.V.Misal



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Sem II

Vivekanand College, Kolhapur (Autonomous)

Department Of Microbiology


Syllabus completion report 2022 - 2023

Name of Teacher – Mr. S. D. Gabale

Sr. No.	Theory/ Practical	Syllabus Allotted	Syllabus completed	Remaining syllabus
1.	Theory	B. Sc. I Paper IV- Applied Microbiology UNIT I A. Water Microbiology i. Sources of microorganisms in water ii. Fecal pollution of water iii. Indicators of fecal pollution iv. Routine bacteriological analysis of water B. Milk Microbiology i. General composition of milk ii. Sources of contamination in milk iii. Spoilage of milk iv. Microbial examination of milk v. Pasteurization	B. Sc. I Paper IV- Applied Microbiology UNIT I A. Water Microbiology i. Sources of microorganisms in water ii. Fecal pollution of water iii. Indicators of fecal pollution iv. Routine bacteriological analysis of water B. Milk Microbiology i. General composition of milk ii. Sources of contamination in milk iii. Spoilage of milk iv. Microbial examination of milk v. Pasteurization	Nil
	Practicals	As per syllabus	As per syllabus	Nil


Mr. S. D. Gabale




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
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Sr. No.	Theory/ Practical	Syllabus Allotted	Syllabus completed	Remaining syllabus
2.	Theory	B. Sc. II Paper VII UNIT II A. Gene transfer in bacteria i. Fate of exogenote ii. Modes of gene transfer B. DNA repair i. Photoreactivation ii. Dark repair mechanism C. Plasmids i. Natural ii. Artificial	B. Sc. II Paper VII UNIT II A. Gene transfer in bacteria i. Fate of exogenote ii. Modes of gene transfer B. DNA repair i. Photoreactivation ii. Dark repair mechanism C. Plasmids i. Natural ii. Artificial	Nil
	Practicals	As per syllabus	As per syllabus	


Mr. S. D. Gabale




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Name of Teacher – Mr. S. D. Gabale

Sr. No.	Theory/ Practical	Syllabus Allotted	Syllabus completed	Remaining syllabus
3.	Theory	<p>B.Sc. III</p> <p>Paper VII Section I Virology</p> <p>Unit I</p> <p>a. Structural properties of viruses</p> <p>b. Isolation, cultivation and Purification of viruses</p> <p>c. Methods of enumeration of viruses</p> <p>Unit II</p> <p>a. Lysogeny:</p> <p>Definition, types, lysogeny by lambda phage, adsorption, penetration, genetic map, establishment and maintenance of repression, integration of lambda genome in host</p> <p>b. Oncogenesis:</p> <p>i. Definition ii. Types of cancer</p> <p>iii. Characteristics of cancer cells</p> <p>iv. Hypothesis about cancer</p>	<p>B.Sc. III</p> <p>Paper VII Section I Virology</p> <p>Unit I</p> <p>a. Structural properties of viruses</p> <p>b. Isolation, cultivation and Purification of viruses</p> <p>c. Methods of enumeration of viruses</p> <p>Unit II</p> <p>a. Lysogeny:</p> <p>Definition, types, lysogeny by lambda phage, adsorption, penetration, genetic map, establishment and maintenance of repression, integration of lambda genome in host</p> <p>b. Oncogenesis:</p> <p>i. Definition ii. Types of cancer</p> <p>iii. Characteristics of cancer cells</p> <p>iv. Hypothesis about cancer</p>	Nil

Mr. S. D. Gabale



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Syllabus completion report 2022 - 2023

Name of Teacher – Mr. S. D. Gabale

Practicals	1. Chemical oxygen demand 2. Biological oxygen demand 3. One step growth experiment 4. Agarose gel electrophoresis	1. Chemical oxygen demand 2. Biological oxygen demand 3. One step growth experiment 4. Agarose gel electrophoresis	
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Syllabus completion report 2022 - 2023

Name of Teacher – S.A Pise

Sr.No	Theory / Practical	Syllabus Allotted	Syllabus Completed	Remaining Syllabus
1	Theory	B.Sc I Sem II Paper III Unit I – Basic Biochemistry A. Protein B.Carbohydrates C.Lipids D.Enzyme E.Nucleic acids	B.Sc I Sem II Paper III Unit I – Basic Biochemistry A. Protein B.Carbohydrates C.Lipids D.Enzyme E.Nucleic acids	Nil
	Practical	As Per Syllabus	As Per Syllabus	Nil

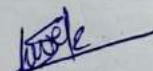

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Name of Teacher – S.A Pise

2	Theory	<p>B.Sc II Sem IV Paper VIII Unit I Immunology A. Immunity B.Non specific defence mechanism of vertebrate body C.Organs of Immunity system D.Antigen E.Antibody F.Theories of antibody production G.Mechanism of antigen-antibody reaction H.Types of Ag-Ab reaction I.Immune response</p>	<p>B.Sc II Sem IV Paper VIII Unit I Immunology A. Immunity B.Non specific defence mechanism of vertebrate body C.Organs of Immunity system D.Antigen E.Antibody F.Theories of antibody production G.Mechanism of antigen-antibody reaction H.Types of Ag-Ab reaction I.Immune response</p>	Nil
	Practical	As Per Syllabus	As Per Syllabus	Nil


Ms.S.A.Pise

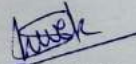



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Syllabus completion report 2022 - 2023

Name of Teacher – S.A Pise

3.	Theory	<p>B.Sc III Sem VI</p> <p>Paper VIII Agricultural Microbiology Section I</p> <p>Unit I</p> <ol style="list-style-type: none"> 1. Enzymes 2. Extraction & purification of enzymes 3. Assay of enzymes 4. Immobilization of enzymes - Methods & applications 5. Confirmation of purified enzymes <p>Unit II</p> <ol style="list-style-type: none"> 1. Basic concepts of-a.Glyoxylate bypass <ol style="list-style-type: none"> b.Phosphoketolase pathway c.Bioluminescence 2. Assimilation of - <ol style="list-style-type: none"> a.Carbon b.Nitrogen c.Sulphur 3. Prokaryotic Biosynthesis of - <ol style="list-style-type: none"> a.RNA b.DNA 	<p>B.Sc III Sem VI</p> <p>Paper VIII Agricultural Microbiology Section I</p> <p>Unit I</p> <ol style="list-style-type: none"> 1. Enzymes 2. Extraction & purification of enzymes 3. Assay of enzymes 4. Immobilization of enzymes - Methods & applications 5. Confirmation of purified enzymes <p>Unit II</p> <ol style="list-style-type: none"> 1. Basic concepts of-a.Glyoxylate bypass <ol style="list-style-type: none"> b.Phosphoketolase pathway c.Bioluminescence 2. Assimilation of - <ol style="list-style-type: none"> a.Carbon b.Nitrogen c.Sulphur 3. Prokaryotic Biosynthesis of - <ol style="list-style-type: none"> a.RNA b.DNA c.Proteins 	Nil
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Syllabus completion report 2022 - 2023

Name of Teacher – S.A Pise

		c. Proteins d. Peptidoglycan	d. Peptidoglycan	
	Practicals	1. Estimation of Ca & Mg content of soil. 2. Estimation of organic carbon content of soil.	1. Estimation of Ca & Mg content of soil. 2. Estimation of organic carbon content of soil.	Nil


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 Department Of Microbiology
 Syllabus completion report 2022 – 2023

Name of the teacher: T.K.Ulhalkar

1	<p>B.Sc I Sem II</p> <p>1) Water microbiology</p> <p>a) Sources of microorganisms in water. b) Fecal pollution of water. c) Indicators of fecal pollution d) Routine Bacteriological analysis of water.</p> <p>2) Milk Microbiology</p> <p>a) General composition of Milk. b) Sources of contamination in milk</p> <p>c) Microbiological examination of Milk d. Spoilage of milk</p> <p>Practicals – As per syllabus</p>	<p>B.Sc I Sem II</p> <p>1) Water microbiology</p> <p>a) Sources of microorganisms in water. b) Fecal pollution of water. c) Indicators of fecal pollution d) Routine Bacteriological analysis of water.</p> <p>2) Milk Microbiology</p> <p>a) General composition of Milk. b) Sources of contamination in milk</p> <p>c) Microbiological examination of Milk d. Spoilage of milk</p> <p>Practicals – As per syllabus</p>	<p>Nil</p>
2	<p>B.Sc II Sem IV</p> <p>1. Forms of DNA.</p> <p>2. Basic concepts – Gene, genome, genotype, phenotype, mutagen, recon, muton, cistron, split genes</p> <p>3. Genetic code</p> <p>4. Organization of chromosomal DNA in <i>E.Coli</i>.</p> <p>5. Mutation</p> <p><u>Practicals</u> – As per syllabus</p>	<p>B.Sc II Sem IV</p> <p>1. Forms of DNA.</p> <p>2. Basic concepts – Gene, genome, genotype, phenotype, mutagen, recon, muton, cistron, split genes</p> <p>3. Genetic code</p> <p>4. Organization of chromosomal DNA in <i>E.Coli</i>.</p> <p>5. Mutation</p> <p><u>Practicals</u> – As per syllabus</p>	<p>Nil</p>

T.K.Ulhalkar
 Signature of Teacher



[Signature]
 Signature of H.O.D
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 DEPARTMENT OF MICROBIOLOGY
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Syllabus completion report 2022 – 2023

Name of the teacher: T.K.Ulhalkar

3	B.Sc III sem VI Environmental Microbiology Unit 1 Unit 2 Practicals – 1.Bioassay of Vit B 12 2.Bioassay of penicillin 3.Isolation of Lactic acid bacteria	B.Sc III sem VI Environmental Microbiology Unit 1 Unit 2 Practicals – 1.Bioassay of Vit B 12 2.Bioassay of penicillin 3.Isolation of Lactic acid bacteria	Nil
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T.K.Ulhalkar
Signature of Teacher



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