

“Dissemination of Education for Knowledge, Science and Culture”

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Microbiology PG

Academic Year 2023-24

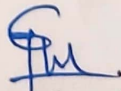
M. Sc. I (NEP syllabus) Course outcomes

	M. Sc. I
	Semester I
Paper I DSC20MIC11	GENETICS AND MOLECULAR BIOLOGY
	On completion of the course, the students will be able to: CO 1 Know the mechanism of DNA replication in prokaryotes and eukaryotes CO 2 Understand the concept of unique and repetitive DNA sequences CO 3 Explain the modes of cell division with respect to mitosis and meiosis CO 4 Know basic and advanced techniques used in molecular genetics
Paper II DSC20MIC12	IMMUNOLOGY
	On completion of the course, the students will be able to: CO 1 Explain functioning of immune system CO 2 Describe regulatory mechanisms of immune system CO 3 Describe Cancer immunology and treatment and prevention of cancer CO 4 Narrate various serodiagnostic techniques of diseases.
Paper III E1 DSE20MIC11	TAXONOMY AND MICROBIAL DIVERSITY
	On completion of the course, the students will be able to: CO 1 Explain the diversity of microorganisms CO 2 Describe the concept of classification of microorganisms CO 3 Describe various characteristics of different types of microorganisms CO 4 Classify newly discovered organism

Paper III E2 DSE20MIC12	VIROLOGY
	<p>On completion of the course, the students will be able to:</p> <p>CO 1 Illustrate life cycles of plant, animal and bacterial viruses</p> <p>CO 2 Describe plant virus transmission, effects of viruses on plant growth, and different plant diseases</p> <p>CO 3 Explain therapy and prophylaxis of viral diseases.</p> <p>CO 4 Describe the methods of destruction of viruses</p>
Paper III E3 DSE20MIC13	BIOMOLECULES
	<p>On completion of the course, the students will be able to:</p> <p>CO 1 Understand different types of macromolecules of cell</p> <p>CO 2 Describe structure and synthesis of macromolecules of cell</p> <p>CO 3 Know functions of macromolecules of cell</p> <p>CO 4 Understand regulation of different metabolic pathways</p>
Paper IV RMD20MIC11	RESEARCH METHODOLOGY
	<p>On completion of the course, the students will be able to:</p> <p>CO 1 Understand fundamentals of research methodology</p> <p>CO 2 Know the importance of research interpretation and report writing</p> <p>CO 3 Understand bioinformatics and its applications</p> <p>CO 4 Know in detail about biostatistics</p>
	Semester II
Paper V DSC20MIC21	TECHNIQUES IN MICROBIOLOGY
	<p>On completion of the course, the students will be able to:</p> <p>CO 1 Differentiate various traditional and advanced techniques used in life science laboratory</p> <p>CO 2 Explain the working and mechanism of the techniques used in the life science research</p> <p>CO 3 Know regarding the ethics that have to follow in research studies</p> <p>CO 4 Understand different applications of the techniques in the research work</p>
Paper VI DSC20MIC22	MICROBIAL PHYSIOLOGY, BIOCHEMISTRY AND METABOLISM
	<p>On completion of the course, the students will be able to:</p> <p>CO 1 Understand various chemical reactions occurring during growth</p>

	<p>of organisms</p> <p>CO 2 Know biosynthesis of macromolecules</p> <p>CO 3 Describe mechanisms of macromolecules degradation</p> <p>CO 4 Explain basic concepts and some recent developments in biochemistry</p>
Paper VII E1 DSE20MIC21	MEDICAL MICROBIOLOGY
	<p>On completion of the course, the students will be able to:</p> <p>CO 1 Understand various bacterial, fungal, and viral diseases in humans</p> <p>CO 2 Understand mechanisms of disease development</p> <p>CO 3-Explain medical applications of microbial metabolites</p> <p>CO 4 Narrate immunological disorders.</p>
Paper VII E2 DSE20MIC22	MICROBIAL ECOLOGY
	<p>On completion of the course, the students will be able to:</p> <p>CO 1 Understand concept of microbial ecosystem</p> <p>CO 2 Describe the effect of environmental factors on the microbial life</p> <p>CO 3 Explain interactions of microbes with other microbes and other living systems like plants and animals.</p> <p>CO 4 Know control of pest with biological way</p>
Paper VII E3 DSE20MIC23	MICROBIAL BIOTECHNOLOGY
	<p>On completion of the course, the students will be able to:</p> <p>CO 1 Describe scope of biotechnology for betterment of human life</p> <p>CO 2 Explain production of various microbial products through gene engineering</p> <p>CO 3 Narrate various applications of microbial biotechnology in agriculture</p> <p>CO 4 Know various applications of microbial biotechnology in food, and pharmaceutical industry .</p>




 Dr. G. K. Sontakke

HEAD
 DEPARTMENT OF MICROBIOLOGY
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