

Shri Vijaysinha Yadav College, Peth Vadgaon

Dept. of Microbiology

Program Specific Outcome

SR.NO.	Program Specific Outcome
PSO 1	Study the microorganisms with regard to morphology, cultural and biochemical characteristics. It will help to classify the microbes to certain extent.
PSO 2	Understand microorganisms and their relationship with the environment and follow the aseptic techniques and conduct the process of sterilization as well as perform the techniques to control the microorganisms.
PSO 3	Conduct the basic research with these microorganisms and perform the diagnostic procedures required in food, milk and pharmaceutical industry.
PSO 4	Acquire knowledge and understanding the concepts of Microbial genetics, Molecular biology, Immunology, Biochemistry, Applied and Environmental Microbiology and Enzymology.

Course Outcome

Sr. No.	Class	Paper No.	Title of Paper	Course Outcome
1	B.Sc.I	I	DSC-25 A Introduction to Microbiology	<ul style="list-style-type: none"> Acquisition of knowledge of historical events in Microbiology and applied branches of Microbiology. Aptitude for identification of taxonomic classification of microorganisms. Acquisition of knowledge of different microscopes and their uses along with stains used in microbial staining procedures.
2		II	DSC-26 A Microbial Diversity	<ul style="list-style-type: none"> Aptitude for identification of all types of microorganisms with their properties, mode of nutrition, reproduction and occurrence. Acquisition of knowledge of controlling microorganisms by chemical and physical agents as well as types of microbial nutrition and culture media used in microbial procedures.
3		III	DSC- 25 B Bacteriology	<ul style="list-style-type: none"> Acquisition of knowledge of cytology and morphology of microorganisms. Isolation and preservation techniques of microorganisms.
4		IV	DSC-26 B Microbial Biochemistry	<ul style="list-style-type: none"> Acquisition of knowledge of biomolecules like protein, carbohydrates, lipids, enzymes and nucleic acid. Aptitude for identification of different pathways of microbial metabolism like EMP, TCA and ETC.
5	B.Sc.II	V	DSC- 25C Microbial physiology and metabolism	<ul style="list-style-type: none"> Acquisition of knowledge about growth phases of bacteria, effect of environmental factors on microbial growth and transport systems of microorganisms. Aptitude for identification of microbial

				metabolism by different pathways like EMP, HMP, ED, TCA etc. and Fermentation.
6		VI	DSC-26 C Applied Microbiology	<ul style="list-style-type: none"> • Acquisition of knowledge of applied branches of Microbiology like Air, Water and Milk Microbiology. • Acquisition of knowledge of types of fermentations, fermenters and detailed fermentation process under industrial Microbiology.
7		VII	DSC- 25 D Microbial Genetics and Molecular Biology	<ul style="list-style-type: none"> • Acquisition of knowledge of microbial genetics and types of mutations. • Operon concept and gene transfer mechanisms in bacteria.
8		VIII	DSC- 26 D Basics in medical microbiology and immunology	<ul style="list-style-type: none"> • Aptitude for identification of different terminologies in medical microbiology along with types of diseases. • Acquisition of knowledge for basic concepts in immunology- antigen, antibody, innate and acquired immune response as well as non-specific defense mechanisms.
9	B.Sc.III	IX	DSE-49 E Virology	<ul style="list-style-type: none"> • Acquisition of knowledge of viral structures, isolation and cultivation techniques of animal and plant viruses. • Acquisition of knowledge of bacteriophages, their reproduction and lysogeny . • Aptitude for identification of oncogenic viruses, different theories of oncogenesis and characteristics of cancer cell.
10		X	DSE-50 E Immunology	<ul style="list-style-type: none"> • Acquisition of knowledge of different types of immune cells and organs. • Acquisition of knowledge of molecular mechanisms of antibody production, complement system, monoclonal antibody. • Aptitude for identification of different hypersensitivity reactions under Gell and Coombs Classification and autoimmunity.
11		XI	DSE-51 E Food	<ul style="list-style-type: none"> • Acquisition of knowledge of different

			and Industrial Microbiology	<p>food poisonings and food borne infections due to microorganisms.</p> <ul style="list-style-type: none"> • Acquisition of knowledge of food preservation techniques used in industry, microbial preservation techniques. • Aptitude for identification of different industrial productions using fermentation technology.
12		XII	DSE-52 E Agricultural Microbiology	<ul style="list-style-type: none"> • Aptitude for identification of role of microorganisms in soil fertility, elemental cycles and microbial interactions. • Acquisition of knowledge of biofertilizers, biopesticides and different plant diseases.
13		XIII	DSE-49 F Microbial Genetics	<ul style="list-style-type: none"> • Acquisition of knowledge of basic concepts in microbial genetics, mutations and methods of isolation of mutants. • Acquisition of knowledge of genetic complementation, extrachromosomal inheritance and genetic engg.
14		XIV	DSE-50 F Microbial Biochemistry	<ul style="list-style-type: none"> • Aptitude for identification of different types of enzymes, structures of enzymes and purification techniques of enzymes as well as assays of enzymes. • Acquisition of knowledge of Microbial metabolism through different pathways like PP, ED, PK, Glyoxylate Bypass etc.
15		XV	DSE-51 F Environmental Microbiology	<ul style="list-style-type: none"> • Acquisition of knowledge of waste management, different types of waste and its characteristics, treatment of waste. • Understand the environmental aspects of microbial control and bioremediation.
16		XVI	DSE-52 F Medical Microbiology	<ul style="list-style-type: none"> • Acquisition of knowledge of morphological, biochemical characters and mode of transmission of different microorganisms in causing disease, chemotherapy and the concepts of gene therapy.