

Shri Shivaji Education Society Amravati's  
Science College, Congress Nagar, Nagpur

**P.G. Department of Microbiology**

**M. Sc. Semester-I (2023-2024)**

**Microbiology Paper I**

Name of Teacher – Ms. Anjali Pogade

Sr No	Name of Student	Assignment Topic
1.	Astha A.Sakharwade	Biosynthesis of cell wall polysaccharides
2.	Akanksha R.Bisen	Bacterial peptidoglycan
3.	Akanksha V.Tekade	Plant Lectins: - ConA, GS4, WGA
4.	Anisha A.Shende	Animal:- Galectin A, MBP-1
5.	Anuradha P.Khope	Viral :- HA, VPI.
6.	Arshiya S.Mushtaque	Bacterial:- LT,CT
7.	Arya S.Walode	Reverse TCA cycle
8.	Bhisvani M.Dhurve	Biosynthesis of microbial exopolysaccharides (alginate)
9.	Ishita Y.Padgil	Characteristics of alpha-helix and $\beta$ -sheets
10.	Ishwari N.Gawande	Determination of primary structure of polypeptide (N-terminal)
11.	Leena N. Meher	C-terminal determination
12.	Manisha G.Lilhare	Method of sequencing of peptides
13.	Manisha R. Roy	Biosynthesis of amino acids
14.	NamrataO.Nagose	Concept of protein domain and motif
15.	OjaswiniR.Bhagat	Common motifs and their role in metabolism
16.	RujutaR.Ramteke	Structural details of Duplex DNA

17.	Shamim M. Shahzad	Nitrification and Anammox
18.	Shivam A.Dekapurwar	Nitrate reduction and Denitrification
19.	Snehal N.Sahare	Nitrogen fixation: Symbiotic, non symbiotic
20.	Vaishnavi V. Ingle	Sulphate reduction
21.	Vami K.Masram	Biochemical pathway in bacteria
22.	Yashoda R.Wade	Oxygenic photosynthesis:-Cyanobacteria

*Pogade*

Signature of Teacher  
Ms. Anjali Pogade



*Pranita Gulhane*

Dr. Pranita Gulhane  
Head of the Department

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**Microbiology Paper II**

Name of Teacher – Dr. Pranita Gulhane

Sr No	Name of Student	Assignment Topic
1.	Astha A.Sakharwade	Concept of enzyme specificity
2.	Akanksha R.Bisen	Mechanism of enzyme action
3.	Akanksha V.Tekade	concept and Lactate dehydrogenases as marker enzymes
4.	Anisha A.Shende	Concept and mechanism of fatty acid synthase and pyruvate dehydrogenase complexes
5.	Anuradha P.Khope	Allosteric (example ATCase)
6.	Arshiya S.Mushtaque	Chemical modification and calmodulin mediated regulation
7.	Arya S.Walode	Mechanism of action of lysozyme and serine proteases
8.	Bhisvani M.Dhurve	Menten equation and its transformations
9.	Ishita Y.Padgil	Kinetics of enzyme inhibition
10.	Ishwari N.Gawande	Kinetics of bisubstrate reaction & multistep reactions
11.	Leena N. Meher	Kinetic analysis of allosteric enzymes
12.	Manisha G.Lilhare	
13.	Manisha R. Roy	Covalent Modification
14.	Namrata O.Nagose	Feed -back inhibition
15.	Ojaswini R.Bhagat	Techniques for isolation and purification of enzymes

16.	Rujuta R.Ramteke	ligand binding studies: association and dissociation constants
17.	Shamim M. Shahzad	Co-operative ligand binding MWC or concerted model
18.	Shivam A.Dekapurwar	Enzyme biosensors
19.	Snehal N.Sahare	Industrial applications of enzymes (Amylase, Protease, Cellulase)
20.	Vaishnavi V. Ingle	Protein engineering
21.	Vami K.Masram	Immobilization techniques for cells
22.	Yashoda R.Wade	Immobilized enzyme kinetics



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**Microbiology Paper III**

Name of Teacher – Ms. Ankita Manapure

Sr No	Name of Student	Assignment Topic
1.	Astha A.Sakharwade	Determination of size, shape and Molecular weight of macromolecules
2.	Akanksha R.Bisen	X-ray crystallography
3.	Akanksha V.Tekade	Agarose gel electrophoresis
4.	Anisha A.Shende	Capillary electrophoresis
5.	AnuradhaP.Khope	Immune-electrophoresis
6.	Arshiya S.Mushtaque	Pulse field gel electrophoresis
7.	Arya S.Walode	Two-dimensional gel electrophoresis
8.	Bhisvani M.Dhurve	SDS-page
9.	Ishita Y.Padgil	Western blotting techniques
10.	Ishwari N.Gawande	Southern blotting techniques
11.	Leena N. Meher	Northern blotting techniques
12.	Manisha G.Lilhare	Radioimmunoassay
13.	Manisha R. Roy	NMR and its biological importance
14.	Namrata O.Nagose	Infrared spectroscopy
15.	OjaswiniR.Bhagat	FTIR Spectroscopy and its application
16.	Rujuta R.Ramteke	Basic concept, Autoradiography
17.	Shamim M. Shahzad	Electron Microscopy

18.	Shivam A.Dekapurwar	Staining procedures and microscopy
19.	Snehal N.Sahare	Fluorescent Microscopy
20.	Vaishnavi V. Ingle	FISH
21.	Vami K.Masram	Laser scanning
22.	Yashoda R.Wade	Confocal microscopy

*Ankita Manapure*

Signature of Teacher  
Ms. Ankita Manapure



*Pranita Gulhane*

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**M. Sc. Semester-I (2023-2024)**

**Microbiology Paper IV**

Name of Teacher – Ms. Sayali Sangole

Sr No	Name of Student	Assignment Topic
1.	Astha A.Sakharwade	Research, research methodology, discovery, invention & innovation
2.	Akanksha R.Bisen	General & specific characteristics of research
3.	Akanksha V.Tekade	Types of research- Descriptive & analytical, Applied & fundamental, Qualitative & quantitative, Conceptual and empirical
4.	Anisha A.Shende	Literature survey
5.	Anuradha P.Khope	Genesis of problem, defining of problem & formulation of the problem
6.	Arshiya S.Mushtaque	Identifying gaps in present knowledge.
7.	Arya S.Walode	Features of good research
8.	Bhisvani M.Dhurve	Definition of hypothesis, assumption, postulates
9.	Ishita Y.Padgil	Qualities of good hypothesis
10.	Ishwari N.Gawande	Null Hypothesis and Alternative Hypothesis
11.	Leena N. Meher	Definition & types research methods
12.	Manisha G.Lilhare	characteristics of survey methods their types & advantages
13.	Manisha R. Roy	Experimental method
14.	Namrata O.Nagose	Definition of statistics & bio-statistics, population & types of population
15.	Ojaswini R.Bhagat	Methods of data collection

16.	Rujuta R.Ramteke	Individual, attribute, variate, frequency & frequency distribution, class interval
17.	Shamim M. Shahzad	Central tendency & measures of central tendency
18.	Shivam A.Dekapurwar	Measures of variance or dispersion
19.	Snehal N.Sahare	Chi square test, Student's t-test
20.	Vaishnavi V. Ingle	Correlation analysis. Linear regression
21.	Vami K.Masram	Introduction to ANOVA.
22.	Yashoda R.Wade	Use of statistical software

*Sangole*

Signature of Teacher  
Ms. Sayali Sangole



*Pranita Gulhane*

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Head of the Department  
Department of Microbiology  
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NAGPUR.