

Walchand College of Arts and Science (Autonomous), Solapur
W.H.Marg, Ashok Chowk, Solapur

**Broad Syllabus for Examination
for the Post of Assistant Professor in Microbiology**

- 1) History and Scope of Microbiology
- 2) General Microbiology, Microbial Diversity and Systematics, Microbial Taxonomy and Nomenclature
- 3) Bacteriology, Virology, Mycology, Phycology and Microalgae, Archaea and Extremophiles
- 4) Microbial Cell Biology, Microbial Physiology
- 5) Microbial Metabolism and Bioenergetics, Microbial Growth and Nutrition
- 6) Microbial Genetics, Molecular Biology, Molecular Genetics and Gene Regulation, Genomics and Microbial Genomics
- 7) Proteomics, Metabolomics and Other Omics, Recombinant DNA Technology, Microbial Biotechnology
- 8) Industrial Microbiology, Fermentation Technology, Bioprocess Technology, Food Microbiology, Dairy Microbiology, Agricultural and Soil Microbiology
- 9) Environmental Microbiology, Aquatic Microbiology, Medical Microbiology, Clinical Microbiology
- 10) Immunology, Microbial Pathogenesis, Epidemiology and Infectious Diseases
- 11) Antimicrobial Agents and Drug Resistance, Antimicrobial Resistance (AMR)
- 12) Microbiome Science, Host–Microbe Interactions, Probiotics and Prebiotics
- 13) Microbial Ecology, Bioremediation and Waste Management, Microbial Enzymology
- 14) Biofertilizers and Biopesticides, Pharmaceutical Microbiology, Biosafety and Biosecurity, Public Health Microbiology
- 15) Bioinformatics and Computational Microbiology, Synthetic Biology, Emerging and Contemporary Areas in Microbiology

Category	Suggested Coverage
Classical/Fundamental Areas	30–35%
Core Discipline Knowledge	30–35%
Applied and Interdisciplinary Areas	20–25%
Contemporary and Emerging Areas	10–15%