



JAIN
DEEMED-TO-BE UNIVERSITY

SCHOOL OF
SCIENCES

PhD Entrance Exam Syllabus - 2022
Biotechnology / Zoology

Cell Biology and Genetics

Cell organelles-structure and functions, plasma membrane, microfilaments and motility; Cell cycle and its regulation, Cytokines, Mendelian genetics, chromosome organization- prokaryotes and Eukaryotes; Mutations.

Ecology/Environmental Biotechnology

Biomes, Air, water soil pollution; Global warming, Greenhouse effects, Bioremediation.

Biochemistry

Biomolecules; Metabolism-carbohydrates, proteins, lipids; Photosynthesis; Enzymes and its regulation.

Molecular Biology

DNA-structure and function, Replication- prokaryotes and eukaryotes, Transcription, protein synthesis, Gene analysis techniques- Electrophoresis, PCR, Blotting, restriction digestion, DNA sequencing.