School of Life Science
Devi Ahilya Vishwavidyalaya, Indore, M.P.

Admission Information (Session 2024)

School of Life Science, DAVV, Indore is one of the premier university teaching departments (UTDs) that is running Postgraduate teaching and research program in Life Science in India.

We, at School of Life Science, DAVV, are offering two Masters Programs:

1. M.Sc. Life Science
2. M.Sc. Industrial Microbiology

All the aspirants for the above mentioned courses are hereby informed that the **admission for the upcoming session 2024 will be via CUET-PG. Last Date for application currently is 24/01/2024**

S.no.	Program name	Duration	Seats	Eligibility	Admission mode	Admission Process	QP Code for the subject to be taken for CUET
1	M.Sc. Life Science	2 years	20	50% marks in B.Sc. Degree in subjects of Biological Sciences	Counselling based on Merit	CUET-PG	SCQP17
2	M.Sc. Industrial Microbiology	2 years	15	First class B.Sc. Degree in subjects of Biological Sciences with Microbiology as one of the subjects at B.Sc. level	Counselling based on Merit	CUET-PG	SCQP03

Please feel free to contact us in case of any admission related query.

Email id: office.lifescience@gmail.com

Contact no.: 0731- 2467029

Syllabus for Life Sciences (SCQP17)

Note:

i. There will be one Question Paper which will have 100 questions.

ii. All questions will be compulsory.

iii. The Question Paper will have two Parts i.e. Part A and Part B:

iv. Part A will have 25 questions based on Language Comprehension/Verbal Ability, General Awareness, Mathematical/Quantitative ability and Analytical Skills.

v. Part B will have 75 questions based on Subject-Specific Knowledge.

Life Sciences (SCQP17)

1. Techniques: Principles and applications of chromatography, spectroscopy, microscopy, electrophoresis, centrifugation, blotting, PCR & radioisotope techniques

2. Chromatin structure and function: Organization of chromosomes in prokaryotes and eukaryotes, chromatin types, centromere, Telomere and concept of gene

3. Biochemistry: Structure and functions of proteins, DNA, carbohydrates, lipids & vitamins. Bioenergetics, Glycolysis, TCA cycle, Electron Transport System and ATP synthesis, oxidation and synthesis of fatty acid, membrane structure and function

4. Biotechnology: Recombinant DNA technology, principles of gene cloning, applications of biotechnology in medicine, industry and agriculture, animal & plant cell culture, environmental biotechnology

5. Microbiology: Diversity of microbes, bacterial reproduction, antimicrobial agents, significance of microbes in the industry and agriculture, antigen, antibody, complement systems, immunity, vaccines, plant virus, animal virus and environmental microbiology.

6. Molecular Genetics: Principles of inheritance, linkage & crossing over, chromosomal aberrations, extrachromosomal inheritance, replication, transcription, translation, DNA repair and population genetics

7. Plant Sciences: Bryophytes, Pteridophytes, Gymnosperms, Angiosperms, Vascular system in plants, Economic important of plants, Photosynthesis, Photoperiodism, Vernalization, and Biogeochemical cycle

8. Animal Sciences: Characteristics of invertebrates and vertebrates, anatomy and physiology of different system of humans, nerve impulse transmission, endocrinology, human diseases. Apoptosis and cancer, inherited diseases, animal cell culture.

Syllabus for Applied Microbiology (SCQP03)

Note:

i. The Question Paper which will have 75 questions.

ii. All questions will be based on Subject-Specific Knowledge.

iii. All questions are compulsory.

iv. The Questions will be Bilingual (English/Hindi)

Applied Microbiology (SCQP03)

Microbiology

- History and scope of Microbiology
- Position and diversity of microorganisms in the living world
- Structure and organization of a bacterial cell
- Bacteriophages, viroid's, prions
- Biogeochemical cycles: Carbon, Nitrogen, Phosphorous and Sulfur
- General accounts of microbes in diverse environments
- Cultivation of microbes and Microbial growth curve
- Mechanisms of gene transfer
- Basic concepts of gene regulation
- Fermented foods and food-borne diseases
- Types of fermentations and fermenters
- Bio fertilizers and bio pesticides
- Microbial interactions
- Emerging infectious diseases

Cytology and Genetics

- Ultrastructure of plant and animal cell
- Cell cycle
- Mendel's laws and cytoplasmic inheritance
- Interaction of genes
- Linkage and crossing over

- Sex determination in plants and animals
- Modern concept of gene structure
- Mutations and mutagens

Biochemistry

- Proteins
- Enzymes
- Carbohydrates
- Lipids
- Nucleic acids and Genetic code

Physiology

- Water relations
- Cell Membrane
- Oxygenic and An oxygenic Photosynthesis
- Respiration: Aerobic, anaerobic and fermentation Hormones

Biotechnology

- Vectors: Plasmid, lambda phage based, M13 based, Cosmids, BAC, YAC,
- expression vectors, Agrobacterium-based
- Tools and Techniques in biotechnology: Restriction enzymes, ligases, DNA
- polymerases, PCR, Sangers method of sequencing, Southern blotting, Northern
- Blotting, DNA microarray, genomic and cDNA libraries, gene gun
- RDT based products

Bio techniques

- Chromatography
- Electrophoresis: Agarose gel, SDS PAGE, IEF and 2D
- Microscopy
- Centrifugation
- Spectrophotometry

Immunology

- Cells and organs of immune system
- Innate and adaptive immune response
- Antigen and antibody
- Complement system
- MHC
- Immunological techniques

Ecology

- Adaptations
- Population ecology
- Community Ecology
- Ecosystem function
- Ecological succession
- Environmental pollution