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Nutan Vidyalaya Sevabhavi Education Society, Umri

LATE BABASAHEB DESHMUKH GORTHEKAR MAHAVIDYALAYA, UMRI

Dist. Nanded, (Maharashtra)-431807

(Arts, Commerce & Science)

(Affiliated to Swami Ramanand Teerth Marathwada University, Nanded)

(A UGC 2(F) & 12(B) Recognized)

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Ref. No. LBDGMU/2019-20/

Date :

B.Sc. First Year Zoology

Semester -I Paper: CCZ-I: Biodiversity of Invertebrates and Chordates

Outcome of the Course:

1. The student will be able to identify a given invertebrate up to class level.
2. Ability to understand the contribution of Invertebrates in the biodiversity index of any given habitat.
3. Ability to understand and appreciate the ecological and economic importance of invertebrates and vertebrates.
4. Ability to identify and describe external morphology and internal anatomical features of representative invertebrate species.

Paper: CCZ-I: Biodiversity of Invertebrates and Chordates

Outcome of the Course:

1. The student will be able to identify and understand the Biodiversity of Chordates.
2. Ability to understand anatomical relation between different vertebrate classes.
3. The learner will be able to understand the economic importance of Chordates.

Paper: CCZ-II: Comparative Anatomy and Developmental Biology of Vertebrates

Outcome of the Course:

1. The student will be able to identify and understand comparative anatomical structure of vertebrate organ systems.

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2. The learner will be able to understand the evolution of various organs and systems in the vertebrate body according to its environment.
3. Understand the plasticity of organ systems to adapt to the environment and acquire different novel forms.

Paper: CCZ-II: Comparative Anatomy and Developmental Biology of Vertebrates

Outcome of the Course:

1. The student will be able to explain the basics processes of vertebrate embryonic development.
2. Ability to describe the various steps in vertebrate development.
3. Identify and explain about the different embryonic structures.
4. Describe the functions of different extra-embryonic structures.
5. Understanding of the Assisted Reproductive Technologies.

B.Sc. Second Year

Paper: CCZ- III: Physiology and Biochemistry


Outcome of the Course: On successful completion of the course, the students will be able to

1. Monitor their blood pressure and identify blood groups.
2. Understand function and types of heart & circulatory system.
3. Appreciate the basic function of kidney, main function of nerves.
4. Acquire knowledge on the nature and functions of hormones and learn the mechanism of hormone action.
5. Learn the structure and functions of Endocrine glands.
6. Understand the structure, development and function of reproductive organs in human.

Paper: CCZ- III: Physiology and Biochemistry

Outcomes: 1. Students able to improve the skills in microscopy, slide preparation, observations, drawings and laboratory techniques.

2. To acquaint the students with operations of the different laboratory equipment.


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3. Ability to understand the detection of blood groups of humans.
4. Ability to understand the estimation of blood cell counts, Hemoglobin content in humans.
5. To acquaint the students with operation of clinical procedures for blood & urine analysis.

Paper: CCZ-IV: Cell Biology, Genetics, Evolutionary Biology and Genetic Engineering

Outcome of the Course: On successful completion of the course, the students will be able to

1. Understand the structure and function of the cell as the fundamentals for understanding the functioning of all living organisms.
2. Understand structures and various cellular functions associated with the macromolecules found in cells.
3. Acquire knowledge of Mendelian Genetics and its Extension.
4. Graduates will be able to explain and interpret various processes, phenomena, states and evolutionary tendencies at a biological system level.

Paper: CCZ- IV: Cell Biology, Genetics, Evolutionary Biology and Genetic Engineering

Outcome of the Course: On successful completion of the course, the students will be able to

1. Understand the theories and concepts of evolution.
2. Learn the process of evolution in animals.
3. Understand the patterns of evolutionary changes in animals.
4. Understand the organization and functions of genetic material in the living world.
5. Understand the Recombinant DNA Technology

Paper: CCZP- III Section –A & B Title of Paper: Practical Paper XI: Cell Biology, Genetics, Evolutionary Biology and Genetic

Outcomes:

1. Students would be able to prepare temporary squash preparations of onion root tips for mitosis.
2. Demonstrate the genetic traits in Man.
3. Ability to culture Drosophila flies in the laboratory.
4. Ability for mounting of salivary glands of Drosophila larvae.

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5. Students are able to understand the outline of Genetic Engineering.
6. Ability to learn the role of Genetic Engineering in biology



B.Sc. Third Year Zoology

Semester -V Paper: DSEZ-I; Section -A Title of Paper: Paper-XII -Ecology & Zoogeography

Outcomes:

1. Demonstrate knowledge of biotic and abiotic interactions.
2. Express understanding of environmental issues, and inter-relation between different components of an ecosystems.
3. Ability to elaborate about distribution and abundance of organisms.
4. Apply different experimental techniques to study any ecosystem or its components.
5. Describe the relation between structures and function species in environment.
6. Display knowledge of natural resources and pollution management techniques.

Paper: DSEZ-I; Section -B Title of Paper: Paper- XIII (D)-Environmental Biology- I

Outcomes:

1. Knowledge of the structure and function of earth's ecosystem.
2. An understanding of different types of ecosystems and biodiversity
3. An ability to classify biodiversity and identify threats to biodiversity.
4. An understanding of human influence on biodiversity.
5. Knowledge of modern tools and technique for study and conservation of ecosystem and wildlife.

Paper: DSEZ-II; Section -A Title of Paper: Paper- XIV-Ethology, Biometry and Bioinformatics

Outcomes:

1. An appreciation of animal behavior and complexities of ethology.
2. Knowledge of basic concepts and techniques of biometry.
3. Knowledge and skill to apply the techniques statistical methods in biology.
4. Knowledge and understanding of practical use of computers in bioinformatics.
5. An understanding of the use of biological databases in research.

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Paper: DSEZ-II; Section -B Title of Paper: Paper- XV (D)-Environmental Biology -II

Outcomes:

1. Ability to assimilate causes of pollution, and its effects on environment.
2. Awareness about environmental issues and problems at local, national and international level.
3. An understanding of the laws and agencies pertaining to protection of environment.
4. Knowledge about environment, pollution and related problems.

Paper: DSEZP-I (Based on DSEZ-I; Section-A& DSEZ-II; Section-A)

Outcomes:

1. Skill of handling, testing and analysis of water samples.
2. Recognition and description of animal adaptations under different ecological and zoo-geographic conditions.
3. Describe animal responses to different environmental signals.
4. Apply different techniques to gather analyze data using a computer.
5. Browse, search and download information from online biological databases.

Paper: DSEZP-II (Based on DSEZ-I; Section-B& DSEZ-II; Section-B)

Outcomes:

1. Demonstrate knowledge and skill of identifying, classifying and describing different protozoan, helminth, nematode and arthropod parasites.
2. Perform preservation and mounting of protozoan, helminth, nematode and arthropod parasites.
3. Carry out collection and processing of soil and plant parasitic nematodes.

Paper: DSEZP-II (Based on DSEZ-I; Section-B& DSEZ-II; Section-B)

Outcomes:

1. Ability to measure different environmental parameters of water, air and soil.
2. Skill of identification of plant and animal biodiversity of an ecosystem.
3. Perform quantification of pollutants in abiotic and biotic components of an ecosystem.

Gauri P. C.

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