Year : 2022-23 (Ist sem) : ZOO/DSC/520 (Biosystematics and Animal Diversity) (Zoo-101)

Course Outcomes:

On completion of the course, students should be able-

1. To study fundamental aspects of taxonomy.
2. To study animal diversity.
3. To know the importance of taxonomy.
4. To know the importance animal diversity.

CLASS AVERAGE	5.6	43.3
CLASS AVERAGE (Rounded Off)	6	43
Number of Students Who have scored more than Class Average	47	37
Percentage of Students who has scored more than Class Average	70.14	55.22
Score on Basis of Class Average Benchmark	03	02
Overall Attainment = (03 * 0.2) + (02 * 0.8) = 0.6 + 1.6 = 2.2		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	H(2)	H(2)	M(2)	H(2)	-	-	-	-	-	-	M(2)	M(2)	M(2)	H(2)
CO2	H(2)	H(2)	H(2)	M(2)	-	-	-	-	-	-	H(2)	M(2)	H(2)	M(2)
CO3	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	-	H(2)	M(2)	M(2)	M(2)
CO4	H(2)	H(2)	H(2)	H(2)		-	-	-	-	-	M(2)	M(2)	M(2)	M(2)

Year : 22-23 (Ist sem) : : ZOO/DSC/521 (Biochemistry) (Zoo-102)

Course Outcomes:

On completion of the course, students should be able-

1. Will learn the basic structure and reactions of the biomolecules
2. Will understand the distribution of these biomolecules and their role in life processes
3. Will learn about general metabolic pathways.
4. Will learn metabolic disorders.

CLASS AVERAGE	8.44	61.26
CLASS AVERAGE (Rounded Off)	8	61
Number of Students Who have scored more than Class Average	55	41
Percentage of Students who has scored more than Class Average	82	61
Score on Basis of Class Average Benchmark	03	03
Overall Attainment = (03 * 0.2) + (03 * 0.8) = 0.6 + 2.4 = 3.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	H(3)	M(3)	M(3)	H(3)	-	-	-	-	-	-	H(3)	H(3)	H(3)	H(3)
CO2	H(3)	H(3)	H(3)	H(3)	-	-	-	-	-	-	M(3)	M(3)	M(3)	M(3)
CO3	H(3)	M(3)	M(3)	H(3)	-	-	-	-	-	-	M(3)	H(3)	H(3)	H(3)
CO4	H(3)	H(3)	H(3)	H(3)		-	-	-	-	-	H(3)	H(3)	M(3)	M(3)

Year : 22-23 (Ist sem) : ZOO/DSC/522 (Ecology: Principal and Practices) (Z00-103)

Course Outcomes:

On completion of the course, students should be able-

1. To study fundamental aspects of Biochemistry.
2. To study different biological reaction mechanism.
3. To know the importance of metabolism.
4. To study the biochemical molecules and their interactions.

CLASS AVERAGE	9	53.55
CLASS AVERAGE (Rounded Off)	9	54
Number of Students Who have scored more than Class Average	35	40
Percentage of Students who has scored more than Class Average	52.23	59.70
Score on Basis of Class Average Benchmark	2	2
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Not Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	H(2)	H(2)	H(2)	H(2)	-	-	-	-	-	-	M(2)	M(2)	M(2)	M(2)
CO2	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	-	M(2)	H(2)	H(2)	H(2)
CO3	H(2)	H(2)	H(2)	H(2)	-	-	-	-	-	-	H(2)	H(2)	M(2)	M(2)
CO4	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	-	M(2)	H(2)	H(2)	H(2)

Year : 2022-23 (Ist sem) : ZOO 104- Research Methodology

Course Outcomes:

On completion of the course, students should be able-

1. To study fundamental aspects of Research.
2. To study different types of research.
3. To know the importance of design of research.
4. To study the methods of research.

CLASS AVERAGE	4.49	29.31
CLASS AVERAGE (Rounded Off)	4	29
Number of Students Who have scored more than Class Average	48	41
Percentage of Students who has scored more than Class Average	71.64	61.19
Score on Basis of Class Average Benchmark	3	3
Overall Attainment = (03 * 0.2) + (03 * 0.8) = 0.6 + 2.4 = 3.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(3)**	**H(3)**	**H(3)**	**H(3)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(3)**	**M(3)**	**H(3)**	**M(3)**
CO2	**H(3)**	**M(3)**	**M(3)**	**H(3)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(3)**	**H(3)**	**M(3)**	**M(3)**
CO3	**H(3)**	**H(3)**	**H(3)**	**H(3)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(3)**	**M(3)**	**M(3)**	**M(3)**
CO4	**H(3)**	**M(3)**	**M(3)**	**H(3)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(3)**	**H(3)**	**H(3)**	**H(3)**

Year : 2022-23 (Ist sem) : ZOO/DSC/527 (Helminthology-I) (Zoo-105)

Course Outcomes:

On completion of the course, students should be able-

1. Learn basic things about helminthes, cestodes, and nematodes
2. Learn their classification.
3. Identify the parasites.
4. Develop an expertise in helminthology.

CLASS AVERAGE	9	53.55
CLASS AVERAGE (Rounded Off)	9	54
Number of Students Who have scored more than Class Average	7	6
Percentage of Students who has scored more than Class Average	53.84	46.15
Score on Basis of Class Average Benchmark	2	2
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Not Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	H(2)	H(2)	H(2)	H(2)	-	-	-	-	-	-	M(2)	M(2)	M(2)	M(2)
CO2	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	-	M(2)	H(2)	H(2)	H(2)
CO3	H(2)	H(2)	H(2)	H(2)	-	-	-	-	-	-	H(2)	H(2)	M(2)	M(2)
CO4	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	-	M(2)	H(2)	H(2)	H(2)

Year : 2022-23 (Ist sem) : ZOO/DSC/529 (Entomology-I) (Zoo-107)

Course outcomes

On completion of the course, students should be able to-
1. Learn about basic characterization of class Insecta.
2. Learn classification of the class Insecta
3. Observe morphological characters of the insects and identify them.
4. Learn the various physiological processes of insects.

CLASS AVERAGE	9	53.55
CLASS AVERAGE (Rounded Off)	9	54
Number of Students Who have scored more than Class Average	7	6
Percentage of Students who has scored more than Class Average	53.84	46.15
Score on Basis of Class Average Benchmark	2	2
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Not Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	H(2)	H(2)	H(2)	H(2)	-	-	-	-	-	-	M(2)	M(2)	M(2)	M(2)
CO2	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	-	M(2)	H(2)	H(2)	H(2)
CO3	H(2)	H(2)	H(2)	H(2)	-	-	-	-	-	-	H(2)	H(2)	M(2)	M(2)
CO4	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	-	M(2)	H(2)	H(2)	H(2)

Year : 2022-23 (2nd sem) : ZOO/DSC/570 (Genetics and Bioinformatics)

Course outcomes

On completion of the course, students should be able to-

1. Learn about cell and cellular function at molecular level.
2. Learn about protein secretion, sorting and arranging the proteins to different cell organelle.
3. Learn about central dogma of molecular biology in Prokaryotes.
4. Learn about central dogma of molecular biology in Eukaryotes.

CLASS AVERAGE	8.9	57.80
CLASS AVERAGE (Rounded Off)	9	57
Number of Students Who have scored more than Class Average	18	16
Percentage of Students who has scored more than Class Average	60	53.33
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	H(2)	H(2)	M(2)	M(2)	H(2)
CO2	H(2)	H(2)	M(2)	M(2)	-	-	-	-	-	M(2)	M(2)	M(2)	M(2)	H(2)
CO3	H(2)	H(2)	H(2)	H(2)	-	-	-	-	--	H(2)	M(2)	M(2)	M(2)	M(2)
CO4	M(2)	M(2)	M(2)	M(2)	-	-	-	-	-	H(2)	M(2)	H(2)	H(2)	M(2)

Year : 2022-23 (2nd sem) : ZOO/DSC/571 (Cell and Molecular Biology)

Course outcomes

On completion of the course, students should be able to-

1. Learn about cell and cellular function at molecular level.
2. Learn about protein secretion, sorting and arranging the proteins to different cell organelle.
3. Learn about central dogma of molecular biology in Prokaryotes.
4. Learn about central dogma of molecular biology in Eukaryotes

CLASS AVERAGE	8.9	57.80
CLASS AVERAGE (Rounded Off)	9	57
Number of Students Who have scored more than Class Average	30	28
Percentage of Students who has scored more than Class Average	57.69	53.84
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**M(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**M(2)**	**M(2)**	**H(2)**
CO3	**H(2)**	**H(2)**	**H(2)**	**H(2)**	**-**	**-**	**-**	**-**	**--**	**H(2)**	**M(2)**	**M(2)**	**M(2)**	**M(2)**
CO4	**M(2)**	**M(2)**	**M(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**	**M(2)**

Year : 2022-23 (2nd sem) : ZOO/DSC/572 (Biophysics)

Course outcomes :

On completion of the course, students should be able to-
1. Learn about different applications of physics in biological processes.
2. Universal laws as applied to biological system.
3. Understand concept of physical laws and its applications.
4. Understand various physical mechanism happening in biological systems.

CLASS AVERAGE	10.4	57.15
CLASS AVERAGE (Rounded Off)	10	57
Number of Students Who have scored more than Class Average	30	29
Percentage of Students who has scored more than Class Average	50	48.33
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**H(2)**	**M(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**H(2)**	**M(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**M(2)**	**M(2)**
CO4	**H(2)**	**M(2)**	**M(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**M(2)**	**M(2)**

Year : 2022-23 (2nd sem) : ZOO/DSE/577 (Helminthology-II)

Course outcomes

On completion of the course, students should be able to-

1. Learn about phylogeny, and importance of the helminthic parasites in control of disease.
2. Learn about genomics, and understand about how helminthes survive in human body by manipulating the surface coat.
3. Learn about challenges in vaccine and drug resistance.
4. Learn the skill to identify the plant nematodes and control measures in agricultural productivity.

CLASS AVERAGE	8.6	54.55
CLASS AVERAGE (Rounded Off)	9	55
Number of Students Who have scored more than Class Average	11	10
Percentage of Students who has scored more than Class Average	55	50
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**

Year : 2022-23 (2nd sem) : ZOO/DSE/579 (Entomology-II)

Course outcomes

On completion of the course, students should be able to-
1. Understand the necessity of insects in economics of crop.
2. Identify the pest and will be able to control the pest with the appropriate control mechanism.
3. Learn about the molecular tools in entomological studies.
4. Learn about insect/vectors of importance in medical and veterinary sciences.

CLASS AVERAGE	8.4	52.10
CLASS AVERAGE (Rounded Off)	8	52
Number of Students Who have scored more than Class Average	13	16
Percentage of Students who has scored more than Class Average	43.33	53.33
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**H(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**M(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**M(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**M(2)**
CO4	**H(2)**	**H(2)**	**H(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**M(2)**	**M(2)**

Year : 2022-23 (3rd sem) : Zoo-301 (Developmental Biology)

Course outcomes

On completion of the course, students should be able to-
1. Explain basic concept of developmental biology.
2. Gain detail knowledge about developmental biology and organogenesis.
3. Learn about gametogenesis, embryological development, cleavage mechanism, and gastrulation.
4. Explain role of hormones in metamorphosis and regeneration.

CLASS AVERAGE	9.2	53.55
CLASS AVERAGE (Rounded Off)	9	54
Number of Students Who have scored more than Class Average	31	38
Percentage of Students who has scored more than Class Average	52.23	59.70
Score on Basis of Class Average Benchmark	2	2
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Not Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	H(2)	H(2)	H(2)	H(2)	-	-	-	-	-	-	M(2)	M(2)	M(2)	M(2)
CO2	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	-	M(2)	H(2)	H(2)	H(2)
CO3	H(2)	H(2)	H(2)	H(2)	-	-	-	-	-	-	H(2)	H(2)	M(2)	M(2)
CO4	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	-	M(2)	H(2)	H(2)	H(2)

Year : 2022-23 (3rd sem) : Zoo-302 (Immunobiology)

Course outcomes

On completion of the course, students should be able to-

1. Explain tissue, cell and molecules involved in host defense mechanism.
2. Understand different types of Immunity.
3. Understand interaction of antigen, antibody, complements and other immune components.
4. Describe concept of B-Cell, T-cell, Toll-like receptors, hypersensitivity reactions and autoimmune diseases.

CLASS AVERAGE	7.6	41.62
CLASS AVERAGE (Rounded Off)	9	42
Number of Students Who have scored more than Class Average	24	26
Percentage of Students who has scored more than Class Average	40	43.33
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level attained		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**M(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**

Year : 2022-23 (3rd sem) : Zoo-303 (Applied Biotechnology-I)

Course outcomes

On completion of the course, students should be able to-
1. Understand application of biotechnology in Agriculture and waste recycling.
2. State principal and applications of various diagnostic techniques.
3. Learn about marine biotechnology in detail.
4. Learn about nano biotechnology in detail.

CLASS AVERAGE	8.65	57
CLASS AVERAGE (Rounded Off)	9	57
Number of Students Who have scored more than Class Average	30	28
Percentage of Students who has scored more than Class Average	57.69	53.84
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	H(2)	M(2)	M(2)	H(2)	-	-	-	-	-	H(2)	H(2)	M(2)	M(2)	H(2)
CO2	H(2)	H(2)	M(2)	M(2)	-	-	-	-	-	M(2)	M(2)	M(2)	M(2)	H(2)
CO3	H(2)	H(2)	H(2)	H(2)	-	-	-	-	--	H(2)	M(2)	M(2)	M(2)	M(2)
CO4	M(2)	M(2)	M(2)	M(2)	-	-	-	-	-	H(2)	M(2)	H(2)	H(2)	M(2)

Year : 2022-23 (3rd sem) : Zoo-304 (a. Biostatistics; b. Microbiology and Human welfare)

Course outcomes

On completion of the course, students should be able to-
1. Apply biostatistics knowledge in biological science and in experiments.
2. Perform and apply various tests as per the requirement of experiments.
3. Microorganisms in food, dairy and medical biotechnology
4. Principal and applications of waste treatment process, geo-microbiology and GMO's.

CLASS AVERAGE	8.7	56.12
CLASS AVERAGE (Rounded Off)	9	56
Number of Students Who have scored more than Class Average	29	27
Percentage of Students who has scored more than Class Average	58	54
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**H(2)**	**H(2)**	**H(2)**	-	-	-	-	-	-	**H(2)**	**H(2)**	**M(2)**	**M(2)**
CO2	**M(2)**	**M(2)**	**H(2)**	**M(2)**	-	-	-	-	-	-	**M(2)**	**H(2)**	**H(2)**	**M(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	-	-	-	-	-	-	**M(2)**	**H(2)**	**M(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**H(2)**	**M(2)**	-	-	-	-	-	-	**M(2)**	**H(2)**	**M(2)**	**M(2)**

Year : 2022-23 (3rd sem) : Zoo-310 (Applied Parasitology-I)

Course outcomes

On completion of the course, students should be able to-
1. Enlist types of parasites and host along with their relationships.
2. State the advantages and disadvantages of parasite in life.
3. Explain inter-specific biological relationships.
4. Understand food and water borne diseases.

CLASS AVERAGE	9.1	57.4
CLASS AVERAGE (Rounded Off)	9	57
Number of Students Who have scored more than Class Average	11	12
Percentage of Students who has scored more than Class Average	55	60
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**		**M(2)**	**M(2)**	**H(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**H(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**

Year : 2022-23 (3rd sem) : Zoo-311 (Animal Physiology-I)

Course outcomes

On completion of the course, students should be able to-
1. Explain osmoregulation in various invertebrates.
2. Explain hormonal regulation in various invertebrates.
3. Explain physiological processes like digestion, excretion, reproduction in invertebrates
4. Understand use of invertebrates in medical, non-medical and veterinary sciences.

CLASS AVERAGE	9.4	57.9
CLASS AVERAGE (Rounded Off)	9	58
Number of Students Who have scored more than Class Average	12	15
Percentage of Students who has scored more than Class Average	40	50
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**		**M(2)**	**M(2)**	**H(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**H(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**

Year : 2022-23 (3rd sem) : Zoo-312 (Molecular Biology-I)

Course outcomes

On completion of the course, students should be able to-
1. Explain chemical components' of nucleic acids.
2. Describe structure of DNA, structure and types of RNA
3. Have a proper understanding of prokaryotic and eukaryotic replication.
4. Understand DNA damage and various genetic disorders.

CLASS AVERAGE	9.1	50.2
CLASS AVERAGE (Rounded Off)	9	50
Number of Students Who have scored more than Class Average	13	12
Percentage of Students who has scored more than Class Average	43.33	40
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**		**M(2)**	**M(2)**	**H(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**H(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**

Year : 2022-23 (4th sem) : Zoo-401 (Evolution and animal behavior)

Course outcomes

On completion of the course, students should be able to-
1. Explain various theories of Evolution.
2. Describe origin of biomolecules and their metabolism
3. State the evolutionary time scale.
4. Explain evolution of an organisms.

CLASS AVERAGE	8.7	56.12
CLASS AVERAGE (Rounded Off)	9	56
Number of Students Who have scored more than Class Average	29	27
Percentage of Students who has scored more than Class Average	58	54
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**H(2)**	**H(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**
CO2	**M(2)**	**M(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**H(2)**	**H(2)**	**M(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**H(2)**	**M(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**H(2)**	**M(2)**	**M(2)**

Year : 2022-23 (4th sem) : Zoo-402 (General and comparative physiology)

Course outcomes

On completion of the course, students should be able to-

1. Explain various biological systems.
2. Explain the regulation of different biological system.
3. Describe origin of the biomolecules.
4. Describe metabolism of the biomolecules.

CLASS AVERAGE	8.8	56.33
CLASS AVERAGE (Rounded Off)	9	56
Number of Students Who have scored more than Class Average	29	27
Percentage of Students who has scored more than Class Average	58	54
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**H(2)**	**H(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**
CO2	**M(2)**	**M(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**H(2)**	**H(2)**	**M(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**H(2)**	**M(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**H(2)**	**M(2)**	**M(2)**

Year : 2022-23 (4th sem) : Zoo-403 (Applied Biotechnology-II)

Course outcomes

On completion of the course, students should be able to-

1. Explain and demonstrate their understanding about biofuels biotransformation of reclaimant metabolite and green technology.
2. Describe principles and applications of DNA fingerprinting and Human genome project
3. Perform hands-on experience in molecular biology techniques commonly used in biotechnological research, such as DNA extraction, gel electrophoresis, PCR and DNA sequencing.
4. Understand stem cells, policies, storage and applications.

CLASS AVERAGE	8.9	56.49
CLASS AVERAGE (Rounded Off)	9	56
Number of Students Who have scored more than Class Average	30	29
Percentage of Students who has scored more than Class Average	58.82	56.86
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**M(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**M(2)**	**H(2)**	**M(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**M(2)**	**M(2)**	**M(2)**
CO4	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**M(2)**	**H(2)**	**M(2)**

Year : 2022-23 (4th sem) : Zoo-404 (a. Animal Tissue Culture; b. Virology and Epidemiology)

Course outcomes

On completion of the course, students should be able to-

1. Explain animal tissue culture, sedimentation, contamination etc.
2. Have a proper understanding of bioethics, safety and guidelines of various techniques.
3. Explain genetic recombination, bacterial genetics, lytic and lysogenic cycle.
4. Have a proper understanding of Epidemics, infectious diseases and Global health.

CLASS AVERAGE	8.65	57
CLASS AVERAGE (Rounded Off)	9	57
Number of Students Who have scored more than Class Average	30	28
Percentage of Students who has scored more than Class Average	57.69	53.84
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**H(2)**	**M(2)**	**M(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**M(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**M(2)**	**M(2)**	**M(2)**	**M(2)**	**H(2)**
CO3	**H(2)**	**H(2)**	**H(2)**	**H(2)**	**-**	**-**	**-**	**-**	**--**	**H(2)**	**M(2)**	**M(2)**	**M(2)**	**M(2)**
CO4	**M(2)**	**M(2)**	**M(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**	**M(2)**

Year : 2022-23 (4th sem) : Zoo-405 (Applied Parasitology-II)

Course outcomes

On completion of the course, students should be able to-
1. Explain parasites and its relation to global public health.
2. Describe about parasites, host and their relationships.
3. Have knowledge about various types of parasites.
4. Describe life cycles of different parasites.

CLASS AVERAGE	8.7	54.1
CLASS AVERAGE (Rounded Off)	9	54
Number of Students Who have scored more than Class Average	9	10
Percentage of Students who has scored more than Class Average	45	50
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**M(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**

Year : 2022-23 (4th sem) : Zoo-406 (Animal Physiology-II)

Course outcomes

On completion of the course, students should be able to-

1. Explain cell transport and its types.
2. Explain cell growth and regulations.
3. Describe hormonal mechanism and reproductive physiology.
4. Knowledge about execratory, nervous and reproductive physiology.

CLASS AVERAGE	8.3	55.30
CLASS AVERAGE (Rounded Off)	8	55
Number of Students Who have scored more than Class Average	11	8
Percentage of Students who has scored more than Class Average	55	40
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**

Year : 2022-23 (4th sem) : Zoo-407 (Molecular Biology-II)

Course outcomes

On completion of the course, students should be able to-
1. Explain the principal behind gene heredity.
2. Explain DNA and RNA as a genetic material.
3. Describe about DNA damages and types of repair.
4. Have knowledge about genomic organization, cot and rot values, gene families etc.

CLASS AVERAGE	8.1	53.4
CLASS AVERAGE (Rounded Off)	8	53
Number of Students Who have scored more than Class Average	9	8
Percentage of Students who has scored more than Class Average	45	40
Score on Basis of Class Average Benchmark	02	02
Overall Attainment = (02 * 0.2) + (02 * 0.8) = 0.4 + 1.6 = 2.0		
Target Attainment Level Achieved		

CO-PO-PSO Attainment Matrix:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	PSO4
CO1	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO2	**H(2)**	**H(2)**	**H(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**
CO3	**H(2)**	**M(2)**	**M(2)**	**H(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**H(2)**	**H(2)**
CO4	**H(2)**	**H(2)**	**M(2)**	**M(2)**	**-**	**-**	**-**	**-**	**-**	**-**	**H(2)**	**M(2)**	**M(2)**	**H(2)**