Scheme of Examination

M. Sc. Biotechnology

(Applicable to the students admitted during the Academic Year 2018-2019 onwards)

Semester	Course Code	Name of the Course	Ins. Hrs / Week	Duration of Examination	Exam			Credits
					CIA	ESE	Total	
I	18PGBTC101	Paper – I Molecular Biology and Genetics	4	3	25	75	100	4
	18PGBTC102	Paper – II Biochemistry	4	3	25	75	100	4
	18PGBTC103	Paper – III Microbiology	4	3	25	75	100	4
	18PGBTC104	Paper – IV Bioinstrumentation & Biostatistics	4	3	25	75	100	4
	18PGBTQ201	Practical – I Biochemistry and Industrial Biotechnology	5	-	-	-	-	-
	18PGBTQ202	Practical – II Microbiology and rDNA Technology	5	-	-	-	-	-
	18PGBTE101 /102/103	Discipline Specific Elective Paper – I	4	3	25	75	100	4
			30				**500**	**20**
II	18PGBTC205	Paper – V Plant Biotechnology	4	3	25	75	100	4
	18PGBTC206	Paper – VI Genetic Engineering	4	3	25	75	100	4
	18PGBTC207	Paper – VII Industrial Biotechnology	4	3	25	75	100	4
	18PGBTC208	Paper – VIII Bioethics, Biosafety & IPR	4	3	25	75	100	4
	18PGBTQ201	Practical – I Biochemistry and Industrial Biotechnology	5	6	40	60	100	4
	18PGBTQ202	Practical – II Microbiology and rDNA Technology	5	6	40	60	100	4
	18PGBTE201 /202/203	Discipline Specific Elective Paper – II	4	3	25	75	100	4
			30				**700**	**28**
III	18PGBTC309	Paper – IX Immunology and Immunotechnology	4	3	25	75	100	4
	18PGBTC310	Paper – X Animal Biotechnology	4	3	25	75	100	4
	18PGBTC311	Paper – XI Pharmaceutical Biotechnology	4	3	25	75	100	4
	18PGBTC312	Paper – XII Omics Concepts	4	3	25	75	100	4
	I8PGBTQ403	Practical III – Plant and Animal Biotechnology	5	-	-	-	-	-
	I8PGBTQ404	Practical IV – Immunology and Pharmaceutical Biotechnology	5	-	-	-	-	-
	18PGBTE301 /302/303	Discipline Specific Elective Paper – III	4	3	25	75	100	4
	18PGBTT301	Internship Training	-	-	External		50	2
	18PGBTVAL	Skill Enhancement Course - Advanced Training in Molecular Biological Techniques	-	-	-	-	-	Grade
			30				**550**	**22**
IV	18PGBTV401	*Research Project and Viva-Voce	16	-	-	-	200	8

	18PGBTE401 /402/403	Discipline Specific Elective Paper – IV	4	3	25	75	100	4
	I8PGBTQ403	Practical III – Plant and Animal Biotechnology	5	6	40	60	100	4
	I8PGBTQ404	Practical IV – Immunology and Pharmaceutical Biotechnology	5	6	40	60	100	4
			30				**500**	**20**
						TOTAL	**2250**	**90**
	Advanced Learners Courses for Additional Credits		2 Credits / Paper				-	8[$]

[$] Not included in CGPA calculation

*Research Project and Viva-Voce Guidelines
1) Project is pertain to the field of Biotechnology
2) Two review meetings should be conducted at regular intervals in the presence of HoD and respective guide. The review should evaluate for a maximum of 50 marks.

Review	Maximum Marks
I	50
II	50

Dissertation evaluation	60 Marks
Viva-Voce	40 Marks

List of Discipline Specific Elective Papers

	GROUP A	GROUP B	GROUP C
Paper I / Sem. I	Environmental Biotechnology	Bioentrepreneurship	Research Methodology
Paper II / Sem. II	Agricultural Biotechnology	Down Stream Processing	Applied Biostatistics
Paper III / Sem. III	Food Biotechnology	Quality Control and Assurance	Bioinformatics and Molecular Biology Databases
Paper IV/ Sem. IV	Medical Biotechnology	Occupational Health and Industrial Safety	Drug Designing and Molecular Modeling

List of Advanced Learners Course [Self study]

S. No.	Course Code	Name of the Course
1.	18PGBTSS01	Cell Communication and Cell Signaling
2.	18PGBTSS02	Diversity of Life Forms
3.	18PGBTSS03	Ecological Principles
4.	18PGBTSS04	Applied Biology
5.	18PGBTSS05	Histochemical and Immunological Techniques

Programme Outcomes

PO1 Science Knowledge: Apply the knowledge of science, biological fundamentals, and a biotechnological specialization to the solution of complex biological problems

PO2 Ethics: Apply reasoning informed by the appropriate knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the biotechnology practice

PO3 Effective Citizenship: Understand the impact of the bioscience solutions in societal and environmental contexts, and demonstrate the knowledge, and need for sustainable development

PO4 Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

Programme Specific Outcomes

PSO1 Demonstrate the ability to design, conduct experiments and analyze data in the field of Biotechnology

PSO2 Ability to apply Biotechnology tools in biological research

PSO3 To make them independently carry out research & development work to solve practical problem

PSO4 To have successful career as professional or a researcher through lifelong learning in the field of biotechnology

PSO5 To make them capable in decision making at personal and professional level

Chairman
Board of Studies in Biotechnology
Nehru Arts and Science College
Coimbatore