Parul University

Subject Teaching & Examination Scheme

M.Sc_Biotechnology 2019-20

Semester - 1

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	**Subject**	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
11202103	Molecular Biology	3	3	-	-	20	-	20	60	-	50	-	100
11202104	Analytical Techniques	3	3	-	-	20	-	20	60	-	50	-	100
11202105	Biostatistics and Computer Applications	3	3	-	-	20	-	20	60	-	50	-	100
11202106	Lab-1 Biochemistry and Analytical Techniques	2	-	4	-	-	20	20	-	60	-	50	100
11202107	Lab-2 Molecular biology	2	-	4	-	-	20	20	-	60	-	50	100
11202113	Seminar	1	-	-	1	-	-	20	-	30	-	25	50
11203106	Biochemistry	3	3	-	-	20	-	20	60	-	50	-	100
11203107	Cell and Developmental Biology	3	3	-	-	20	-	20	60	-	50	-	100
	Total	20	15	8	1								750

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Theory Passing % : 50 **Practical Passing % :** 50

Semester - 2 Elective - 1

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	**Subject**	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
11200201	Research Methodology & Scientific Writing	4	4	-	-	20	-	20	60	-	50	-	100
11202180	Microbiology & Industrial Applications	4	4	-	-	20	-	20	60	-	50	-	100

Semester - 2

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	**Subject**	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
11202154	Genetic engineering	4	4	-	-	20	-	20	60	-	50	-	100
11202155	Immunology	4	4	-	-	20	-	20	60	-	50	-	100
11202158	Genetics	4	4	-	-	20	-	20	60	-	50	-	100
11202159	Lab-I Immunology	2	-	4	-	-	20	20	-	60	-	50	100
11202160	Lab- 2 Microbiology and Genetic Engineering	2	-	4	-	-	20	20	-	60	-	50	100
11202161	Seminar	1	-	-	1	-	-	20	-	30	-	25	50
	Elective - 1 (Compulsory Subjects :1)	4	4	-	-	20	-	20	60	-	50	-	100
	Total	21	16	8	1								650

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 50 **Practical Passing % :** 50

Semester - 3

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	**Subject**	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
11202206	Enzymology	4	4	-	-	20	-	20	60	-	50	-	100
11202207	Plant and Animal biotechnology	4	4	-	-	20	-	20	60	-	50	-	100
11202208	Molecular virology and Immunotechnology	4	4	-	-	20	-	20	60	-	50	-	100
11202210	Lab-1 Plant and Animal biotechnology	2	-	4	-	-	20	20	-	60	-	50	100
11202211	Lab-2 Genomics and proteomics	2	-	4	-	-	20	20	-	60	-	50	100
11202212	Seminar	1	-	-	1	-	-	20	-	30	-	25	50
	M.Sc BT Sem-3 (Compulsory Subjects :1) - Only This Group	4	4	-	-	20	-	20	60	-	50	-	100
	Total	21	16	8	1								650

Semester - 3 M.Sc BT Sem-3

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	**Subject**	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
11202230	Genomics and Proteomics	4	4	-	-	20	-	20	60	-	50	-	100
11202231	Bioentrepreneurship	4	4	-	-	20	-	20	60	-	50	-	100

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Theory Passing % : 50 **Practical Passing % :** 50

Semester - 4

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	**Subject**	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
11202253	Bioprocess Engineering and Techniques	4	4	-	-	20	-	20	60	-	50	-	100
11202255	Dissertation	20	-	20	-	-	100	-	-	200	-	150	300
11202256	Seminar	1	-	-	1	-	-	20	-	30	-	25	50
	M.Sc BT sem-4 (Compulsory Subjects :1) - Only This Group	4	4	-	-	40	-	-	60	-	-	-	100
	Total	29	8	20	1								550

Semester - 4 M.Sc BT sem-4

						Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
Code	**Subject**	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int. + Ext.	Int. + Ext.	
11202282	Intellectual property rights	4	4	-	-	20	-	20	60	-	50	-	100
11202283	Bio emerging Technologies	4	4	-	-	20	-	20	60	-	50	-	100

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
Theory Passing % : 50 **Practical Passing % :** 50

Research Project Guidelines:

Advanced – level disciplinary/interdisciplinary courses related to topic selection and research methodology and initial stage of research will be conducted like: determining the definition of the information needed, determining the methods of collection of qualitative and quantitative data, conducting secondary data analysis etc.

45 days (180 Hrs.)