

Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal

New Scheme of Examination as per AICTE Flexible Curricula

I Semester (Group A)

Bachelor of Technology (B.Tech.)

W.E.F. JULY 2022

GROUP A: (AB, RM, AN, AT, CS, EE, EI, EV, EX, IE, IT, MI, MM, AG, SD, CO, PC)

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem.	Quiz/ Assignment	End Sem.	Lab work & Sessional					
Mandatory Induction Program (First three weeks)				Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations									
Fourth week onwards classes will start													
1.	BT101	BSC-1	Engineering Chemistry	70	20	10	30	20	150	3	-	2	4
2.	BT102	BSC-2	Mathematics-I	70	20	10	-	-	100	3	1	-	4
3.	BT103	HSMC-1	English for Communication	70	20	10	30	20	150	3	-	2	4
4.	BT104	ESC-1	Basic Electrical & Electronics Engineering	70	20	10	30	20	150	2	-	2	3
5.	BT105	ESC-2	Engineering Graphics	70	20	10	30	20	150	2	-	2	3
6.	BT106	ESC-3	Manufacturing Practices	-	-	-	15	10	25	-	-	2	1
7.	BT107	DLC-1	Internship-I (60 Hrs Duration) at the Institute level	To be completed during or at the end of the second semester. Its evaluation/credit to be added in third semester.									
8.	BT108	DLC-2	Swachh Bharat Summer Internship Unnat Bharat Abhiyan (100Hrs)/ Rural Outreach				15	10	25	-	-	4	2
			Total	350	100	50	150	100	750	13	1	14	21

Automation and Robotics(AB), Robotics and Mechatronics (RM), Agriculture Engineering (AN), Agriculture Technology (AT), Computer Science & Engineering(CS), Electrical Engineering (EE), Electronics & Instrumentation Engineering (EI), Electric Vehicles (EV), Electrical & Electronics Engineering (EX), Applied Electronics & Instrumentation Engineering (IE), Information Technology (IT), Mining Engineering (MI), Mining and Mineral Processing (MM), 3 D Animation & Graphics (AG), Computer Science & Design (SD), Computer Engineering (CO), Petrochemical Engineering (PC)

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal

New Scheme of Examination as per AICTE Flexible Curricula

II Semester (Group A)

Bachelor of Technology (B.Tech.)

W.E.F. JULY 2022

GROUP A: (AB, RM, AN, AT, CS, EE, EI, EV, EX, IE, IT, MI, MM, AG, SD, CO, PC)

S.No .	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory Slot			Practical Slot			L	T	P	
				End Sem.	Mid Sem Exam.	Quiz/ Assignme nt	End Sem.	Lab work & Sessional					
1.	BT201	BSC-3	Engineering Physics	70	20	10	30	20	150	2	1	2	4
2.	BT202	BSC-4	Mathematics-II	70	20	10	-	-	100	3	1	-	4
3.	BT203	ESC-4	Basic Mechanical Engineering	70	20	10	30	20	150	3	-	2	4
4.	BT204	ESC-5	Basic Civil Engineering & Mechanics	70	20	10	30	20	150	3	-	2	4
5.	BT205	ESC-6	Basic Computer Engineering	70	20	10	30	20	150	3	-	2	4
6.	BT206	HSMC-2	Language Lab & Seminars	-	-	-	30	20	50	-	-	2	1
7.	BT107	DLC-1	Internship-I (60 Hrs Duration) at the Institute level	To be completed during first/second semester. Its evaluation/credit to be added in third semester.									
			Total	350	100	50	150	100	750	14	2	10	21

Automation and Robotics(AB), Robotics and Mechatronics (RM), Agriculture Engineering (AN), Agriculture Technology (AT), Computer Science & Engineering(CS), Electrical Engineering (EE), Electronics & Instrumentation Engineering (EI), Electric Vehicles (EV), Electrical & Electronics Engineering (EX), Applied Electronics & Instrumentation Engineering (IE), Information Technology (IT), Mining Engineering (MI), Mining and Mineral Processing (MM), 3 D Animation & Graphics (AG), Computer Science & Design (SD), Computer Engineering (CO), Petrochemical Engineering (PC)

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal

New Scheme of Examination as per AICTE Flexible Curricula

I Semester (Group B)

Bachelor of Technology (B.Tech.)

W.E.F. JULY 2022

GROUP B: (AD, AL, CL, AU, BM, CE, CI, CM, DS, EC, FT, IO, IP, IS, ME, RA, CY, CN, CD, AI, IA)

S.No .	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory Slot			Practical Slot			L	T	P	
				End Sem.	Mid Sem Exam.	Quiz/ Assignme nt	End Sem.	Lab work & Sessional					
Mandatory Induction Program (First three weeks)				Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations									
Fourth week onwards classes will start													
1.	BT201	BSC-3	Engineering Physics	70	20	10	30	20	150	2	1	2	4
2.	BT102	BSC-2	Mathematics-I	70	20	10	-	-	100	3	1	-	4
3.	BT203	ESC-4	Basic Mechanical Engineering	70	20	10	30	20	150	3	-	2	4
4.	BT204	ESC-5	Basic Civil Engineering & Mechanics	70	20	10	30	20	150	3	-	2	4
5.	BT205	ESC-6	Basic Computer Engineering	70	20	10	30	20	150	3	-	2	4
6.	BT206	HSMC-2	Language Lab & Seminars	-	-	-	30	20	50	-	-	2	1
7.	BT107	DLC-1	Internship-I (60 Hrs Duration) at the Institute level	To be completed during first/second semester. Its evaluation/credit to be added in third semester.									
			Total	350	100	50	150	100	750	14	2	10	21

Artificial Intelligence and Data Science (AD), CSE-Artificial Intelligence and Machine Learning(AL), Artificial Intelligence and Machine Learning(CL), Automobile Engineering (AU), Biomedical Engineering (BM), Civil Engineering (CE), Computer Science & Information Technology(CI), Chemical Engineering (CM), Data Science (DS), Electronics & Communication Engineering (EC), Fire Technology & Safety Engineering (FT), CSE –IOT(IO), Industrial Production Engineering (IP), CSE- IOT and Cyber Security Including Block Chain Technolgy (IS), Mechanical Engineering (ME), Robotics and Artificial Intelligence (RA), CSE-Cyber Security (CY), Cyber Security (CN), CSE-Data Science (CD), Artificial Intelligence (AI), CSE-Artificial Intelligence (IA)

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

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New Scheme of Examination as per AICTE Flexible Curricula

II Semester (Group B)

Bachelor of Technology (B.Tech.)

W.E.F. JULY 2022

GROUP B: (AD, AL, CL, AU, BM, CE, CI, CM, DS, EC, FT, IO, IP, IS, ME, RA, CY, CN, CD, AI, IA)

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem.	Quiz/ Assignment	End Sem.	Lab work & Sessional					
1.	BT101	BSC-1	Engineering Chemistry	70	20	10	30	20	150	3	-	2	4
2.	BT202	BSC-4	Mathematics-II	70	20	10	-	-	100	3	1	-	4
3.	BT103	HSMC-1	English for Communication	70	20	10	30	20	150	3	-	2	4
4.	BT104	ESC-1	Basic Electrical & Electronics Engineering	70	20	10	30	20	150	2	-	2	3
5.	BT105	ESC-2	Engineering Graphics	70	20	10	30	20	150	2	-	2	3
6.	BT106	ESC-3	Manufacturing Practices	-	-	-	15	10	25	-	-	2	1
7.	BT107	DLC-1	Internship-I (60 Hrs Duration) at the Institute level	To be completed during or at the end of the second semester. Its evaluation/credit to be added in third semester.									
8.	BT108	DLC-2	Swachh Bharat Summer Internship Unnat Bharat Abhiyan (100Hrs)/ Rural Outreach				15	10	25	-	-	4	2
			Total	350	100	50	150	100	750	13	1	14	21

Artificial Intelligence and Data Science (AD), CSE-Artificial Intelligence and Machine Learning(AL), Artificial Intelligence and Machine Learning(CL), Automobile Engineering (AU), Biomedical Engineering (BM), Civil Engineering (CE), Computer Science & Information Technology(CI), Chemical Engineering (CM), Data Science (DS), Electronics & Communication Engineering (EC), Fire Technology & Safety Engineering (FT), CSE –IOT(IO), Industrial Production Engineering (IP), CSE- IOT and Cyber Security Including Block Chain Technology (IS), Mechanical Engineering (ME), Robotics and Artificial Intelligence (RA), CSE-Cyber Security (CY), Cyber Security (CN), CSE-Data Science (CD), Artificial Intelligence (AI), CSE-Artificial Intelligence (IA)

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

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New Scheme of Examination as per AICTE Flexible Curricula

III Semester

**Computer Science and Engineering/Computer Engineering/
Computer Science /Computer Science & Technology/Regional Language/Indian Language]**

For batches admitted in July, 2020 (w.e.f. July, 2021)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work Lab Work & Sessional					
1.	ES301	HSMC-3	Energy & Environmental Engineering	70	20	10	-	-	100	3	1	-	4
2.	CS302	DC-1	Discrete Structure	70	20	10	-	-	100	3	1	-	4
3.	CS303	DC-2	Data Structure	70	20	10	30	20	150	3	-	2	4
4.	CS304	DC-3	Digital Systems	70	20	10	30	20	150	3	-	2	4
5.	CS305	DC-4	Object Oriented Programming & Methodology	70	20	10	30	20	150	3	-	2	4
6.	CS306	DLC-3	Computer Workshop	-	-	-	30	20	50	-	-	4	2
7.	BT107	DLC-1	Evaluation of Internship-I completed at I year level	-	-	-	-	50	50			4	2
8.	BT307	DLC-4	90 hrs Internship based on using various softwares –Internship -II	To be completed anytime during Third/ fourth semester. Its evaluation/credit to be added in fifth semester.									
			Total	350	100	50	120	130	750	15	2	14	24
9.	BT308	MC	Indian Constitution	Non-credit course									
			NSS/NCC										

*Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal

Scheme of Examination as per AICTE Flexible Curricula

**IV Semester Bachelor of Technology (B.Tech.) [Computer Science and Engineering/Computer Engineering/
Computer Science /Computer Science & Technology/Regional Language/Indian Language]**

For batches admitted in July, 2020 (w.e.f. Jan, 2022)

S. No .	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Term work					
								Lab Work & Sessional					
1.	BT401	BSC	Mathematics- III	70	20	10	-	-	100	3	1	-	4
2.	CS402	DC	Analysis Design of Algorithm	70	20	10	30	20	150	2	1	2	4
3.	CS403	DC	Software Engineering	70	20	10	30	20	150	3	1	2	5
4.	CS404	DC	Computer Org. & Architecture	70	20	10	30	20	150	3	1	2	5
5.	CS405	DC	Operating Systems	70	20	10	30	20	150	3	0	2	4
6.	CS406	DLC*	Programming Practices	-	-	-	30	20	50	-	-	4	2
7.	BT407	DLC	90 hrs Internship based on using various software's –Internship -II	To be completed anytime during fourth semester. Its evaluation/credit to be added in fifth semester.									3
		Total		350	100	50	150	100	750	14	4	12	24
8.	BT408	MC	Cyber Security	Non-credit course									
9.	BT409I	MC	Indian Knowledge System	Non-credit course									
	NC001	NSS/NCC											

*A minimum of 2 hours per week should be allotted for the Virtual Lab along with the slot fixed for the conventional lab classes.

MST: Minimum of two mid semester tests to be conducted.

*Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal

Scheme of Examination as per AICTE Flexible Curricula

V Semester Bachelor of Technology (B.Tech.) [Computer Science and Engineering/Computer Engineering/ Computer Science /Computer Science & Technology/Regional Language/Indian Language]

(w.e.f. July, 2019)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory			Practical						
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work					
								Lab Work & Sessional					
1.	CS-501	DC	Theory of Computation	70	20	10	30	20	150	3	-	2	4
2.	CS-502	DC	Database Management Systems	70	20	10	30	20	150	3	-	2	4
3.	CS -503	DE	Departmental Elective	70	20	10	-	-	100	3	1	-	4
4.	CS -504	OE	Open Elective	70	20	10	-	-	100	3	-	-	3
5.	CS -505	D Lab	Lab (Linux)	-	-	-	30	20	50	-	-	4	2
6.	CS -506	O/E Lab	Lab (Python)	-	-	-	30	20	50	-	-	4	2
7.	CS -507	IN	Evaluation of Internship-II	-	-	-	-	100	100	-	-	6	3
8.		IN	Internship - III	To be completed anytime during Fifth/Sixth semester. Its evaluation/credit to be added in Seventh Semester.									
9.	CS -508	P	Minor Project- I	-	-	-	-	50	50			4	2
10.	Additional Credits [#]	[#] Additional credits can be earned through successful completion of credit based MOOC’s Courses available on SWAYAM platform (MHRD) at respective UG level.											
			Total	280	80	40	120	230	750	12	1	22	24

Departmental Electives	Open Electives
CS 503 (A) Data Analytics	CS 504 (A) Internet and Web Technology *
CS 503 (B) Pattern Recognition	CS 504 (B) Object Oriented Programming **
CS 503 (C) Cyber Security	CS 504 (C) Introduction to Database Management Systems**

* Can be offered to students of all branches including CSE

** Can be offered to students of all branches except CSE and IT

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal

Scheme of Examination as per AICTE Flexible Curricula

**VI Semester Bachelor of Technology (B.Tech.) [Computer Science and Engineering/Computer Engineering/
Computer Science /Computer Science & Technology/Regional Language/Indian Language]**

(w.e.f. Jan, 2020)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work Lab Work & Sessional					
1.	CS601	DC	Machine Learning	70	20	10	30	20	150	2	1	2	4
2.	CS602	DC	Computer Networks	70	20	10	30	20	150	2	1	2	4
3.	CS603	DE	Departmental Elective	70	20	10	-	-	100	4	-	0	4
4.	CS604	OE	Open Elective	70	20	10	-	-	100	4	-	0	4
5.	CS605	D Lab	Data Analytics Lab	-	-	-	30	20	50	-	-	6	3
6.	CS606	O/E Lab	Skill Development Lab	-	-	-	30	20	50	-	-	6	3
7.	CS607	IN	Internship-III	To be completed anytime during Fifth/Sixth semester. Its evaluation/credit to be added in Seventh Semester.									
8.	CS608	P	Minor Project II	-	-	-	-	50	50	-	-	4	2
9.	Additional Credits [#]	[#] Additional credits can be earned through successful completion of credit based MOOC's Courses available on SWAYAM platform (MHRD) at respective UG level.											
			Total	280	80	40	120	130	650	12	2	20	24

Departmental Electives	Open Electives
603 (A) Advanced Computer Architecture	604(A) Knowledge Management
603 (B) Computer Graphics & Visualization	604(B) Project Management
603 (C) Compiler Design	604 (C) Rural Technology & Community Development

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

New Scheme of Examination as per AICTE Flexible Curricula

VII Semester Bachelor of Technology (B.Tech.) Computer Science and Engineering/ (w.e.f. July, 2020)
Computer Engineering/Computer Science & Technology Regional Language/Indian Language]

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work Lab Work & Sessional					
1.	CS 701	DC	Software Architectures	70	20	10	30	20	150	2	1	2	4
2.	CS 702	DE	Departmental Elective	70	20	10	-	-	100	3	1	-	4
3.	CS 703	OE	Open Elective	70	20	10	-	-	100	3	0	0	3
4.	CS 704	D Lab	Departmental Elective Lab	-	--	-	30	20	50	-	-	6	3
5.	CS 705	O/E lab	Open Elective Lab	-	-	-	30	20	50	-	-	6	3
6.	CS 706	P	Major Project-I	-	-	-	100	50	150	-	-	8	4
7.	CS 607		Evaluation of Internship -III	-	-	-	-	100	100	-	-	6	3
8.	Additional Credits [#]	[#] Additional credits can be earned through successful completion of credit based MOOC's Courses available on SWAYAM platform (MHRD) at respective level.											UG
			Total	210	60	30	190	210	700	8	2	28	24

Departmental Electives	Open Electives
702(A) Computational Intelligence	703(A) Cryptography & Information Security
702 (B) Deep & Reinforcement Learning	703(B) Data Mining and Warehousing
702 (C) Wireless & Mobile Computing	703(C) Agile Software Development
702 (D) Big Data	703 (D) Disaster Management

[#] Open Electives can be offered to students of all branches **including CSE branch**. However, they can be offered to students of Non-CSE branches only if they have not taken any similar courses previously and have sufficient knowledge of pre-requisite courses (if any) of respective open electives subject.

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal

New Scheme of Examination as per AICTE Flexible Curricula

VIII Semester **Bachelor of Technology (B.Tech.) Computer Science and Engineering/ (w.e.f. Jan, 2021)** Computer Engineering/Computer Science & Technology/ Regional Language/Indian Language]

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work Lab Work & Sessional					
1.	CS 801	DC	Internet of Things	70	20	10	30	20	150	2	1	2	4
2.	CS 802	DE	Departmental Elective	70	20	10	-	-	100	3	1	-	4
3.	CS 803	OE	Open Elective	70	20	10	-	-	100	3	-	-	3
4.	CS 804	D/O/E Lab	D/O elective lab	-	--	-	30	20	50	-	-	6	3
5.	CS 805	P	Major Project-II	-	-	-	70	30	100	-	-	8	4
6.	Additional Credits [#]	#Additional credits can be earned through successful completion of credit based MOOC's Courses available on SWAYAM platform (MHRD) at respective level.											UG
			Total	210	60	30	130	70	500	8	2	16	18

Departmental Electives	Open Electives
802(A) Block Chain Technologies	803(A) Image Processing and Computer Vision [#]
802 (B) Cloud Computing	803(B) Game Theory with Engineering applications [#]
802 (C) High Performance computing	803(C) Internet of Things [*]
802 (D) Object Oriented Software Engineering	803 (D) Managing Innovation and Entrepreneurship [#]

[#] These Open Electives can be offered to students of all branches **including CSE branch**. However, they can be offered to students of Non-CSE branches only if they have not taken any similar courses previously and have sufficient knowledge of pre-requisite courses (if any) of respective open electives subject.

^{*} can be offered to students of all branches except CSE, provided they have not taken any similar course previously and have sufficient knowledge of pre-requisite courses, if any.

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit