

Scheme of Teaching and Examination for B.E in Computer Science and Engineering

SEMESTER III

Sl. No	Subject Code	Course Title	Category code	Teaching Department	QP Setting Dept.	Contact Hours				Credits	Marks			Exam Duration in hrs
						L	T	P	Total		CIE	SEE	Total	
1	20MA310	Mathematics III	BSC	Mathematics	Mathematics	3	0	0	3	3	50	50	100	03
2	20CS310	Data Structures	PCC	CSE	CSE	4	0	0	4	4	50	50	100	03
3	20CS320	Object Oriented Programming using JAVA	PCC	CSE	CSE	3	0	2	5	4	50	50	100	03
4	20CS330	Digital System Design	PCC	CSE	CSE	3	0	0	3	3	50	50	100	03
5	20CS340	Computer Organization	PCC	CSE	CSE	3	0	0	3	3	50	50	100	03
6	20CS350	Discrete Mathematical Structures	PCC	CSE	CSE	3	0	0	3	3	50	50	100	03
7	20HU311	Universal Human Values	HSMC	CSE	HUM	2	0	0	2	2	25	25	50	1.5
8	20CS36L	Data Structure Lab	PCC	CSE	CSE	0	0	3	3	1.5	50	50	100	03
9	20CS37L	Digital System Design Lab	PCC	CSE	CSE	0	0	3	3	1.5	50	50	100	03
10	20MATDIP310	Advanced Mathematics – I *	BSC	Mathematics	Mathematics	3	0	0	3	--	00	100	100	03
						Total Credits				25	Total Marks		850**	

* Only for Students admitted through diploma Lateral entry

** Excluding Advanced Mathematics - I

L: Lecture **T:** Tutorial, **P:** Practical

BSC: Basic Science Course **ESC:** Engineering Science Course

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HSMC: Humanities, Social Science and Management Course

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Semester IV

Sl. No	Subject Code	Course Title	Category code	Teaching Department	QP Setting Dept.	Contact Hours				Credits	Marks			Exam Duration in hrs
						L	T	P	Total		CIE	SEE	Total	
1	20MA410	Mathematics IV	BSC	Mathematics	Mathematics	3	0	0	3	3	50	50	100	03
2	20CS410	Operating Systems	PCC	CSE	CSE	4	0	0	4	4	50	50	100	03
3	20CS420	Design and Analysis of Algorithms	PCC	CSE	CSE	4	0	0	4	4	50	50	100	03
4	20CS430	Data Communication	PCC	CSE	CSE	4	0	0	4	4	50	50	100	03
5	20CS440	Software Engineering	PCC	CSE	CSE	4	0	0	4	4	50	50	100	03
6	20CS450	Theory of Computation	PCC	CSE	CSE	3	0	0	3	3	50	50	100	03
7	20CS46L	Operating Systems Lab	PCC	CSE	CSE	0	0	3	3	1.5	50	50	100	03
8	20CS47L	Design and Analysis of Algorithms Lab	PCC	CSE	CSE	0	0	3	3	1.5	50	50	100	03
9	20MATDIP410	Advanced Mathematics – II *	BSC	Mathematics	Mathematics	3	0	0	3	--	00	100	100	03
10	20HU412	Environmental studies	HSMC	Environmental Engineering	Environmental Engineering	0	0	0	2	0	50	--	50	--
						Total Credits				25	Total Marks			850**

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** Excluding Advanced Mathematics - II

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SEMESTER V

Sl. No	Subject Code	Course Title	Category Code	Teaching Department	QP Setting Dept.	Contact hours				Credits	Marks			Exam Duration in hrs
						L	T	P	Total		CIE	SEE	Total	
1	20CS510	Database Management System	PCC	CSE	CSE	4	0	0	4	4	50	50	100	03
2	20CS520	Computer Networks	PCC	CSE	CSE	4	0	0	4	4	50	50	100	03
3	20CS530	System Software and Compilers	PCC	CSE	CSE	4	0	0	4	4	50	50	100	03
4	20CS540	Introduction to Data Science	PCC	CSE	CSE	3	0	2	5	4	50	50	100	03
5	20CS55X	Professional Elective - I	PEC	CSE	CSE	3	0	0	3	3	50	50	100	03
6	20CS56X	Open Elective - I	OEC	CSE	CSE	3	0	0	3	3	50	50	100	03
7	20CS57L	Database Management System Laboratory	PCC	CSE	CSE	0	0	3	3	1.5	50	50	100	03
8	20CS58L	Computer Networks Laboratory	PCC	CSE	CSE	0	0	3	3	1.5	50	50	100	03
9	20HU511	Essence of Indian Traditional Knowledge	HSMC	Humanities	Humanities	2	0	0	2	0	50	--	50	--
						Total Credits				25	Total Marks		850	

Professional Elective Course – I (3 Credits)			Open Elective Course – I (3 Credits)		
Sl. No	Subject Code	Subject Name	Sl. No	Subject Code	Subject Name
1	20CS551	Mathematics for AI and ML	1	20CS561	Introduction to Object Oriented Programming using JAVA
2	20CS552	Embedded Systems	2	20CS562	Essentials of Operating Systems
3	20CS553	Image Processing	3	20CS563	Basics of Data Structure

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SEMESTER VI

Sl. No	Subject Code	Course Title	Category Code	Teaching Department	DP Setting Dept.	Contact Hours				Credits	Marks			Exam Duration in hrs
						L	T	P	Total		CIE	SEE	Total	
1	20CS610	AI and Machine Learning	PCC	CSE	CSE	4	0	0	4	4	50	50	100	03
2	20CS620	Web Technology	PCC	CSE	CSE	3	0	2	5	4	50	50	100	03
3	20CS630	Internet of Things	PCC	CSE	CSE	3	0	0	3	3	50	50	100	03
4	20CS64X	Professional Elective - II	PEC	CSE	CSE	3	0	0	3	3	50	50	100	03
5	20CS65X	Open Elective - II	OEC	CSE	CSE	3	0	0	3	3	50	50	100	03
6	20CS66X	Open Elective - III	OEC	CSE	CSE	3	0	0	3	3	50	50	100	03
7	20CS67L	AI and Machine Learning Laboratory	PCC	CSE	CSE	0	0	3	3	1.5	50	50	100	03
8	20CS68L	Internet of Things Laboratory	PCC	CSE	CSE	0	0	3	3	1.5	50	50	100	03
9	20CS69P	Mini Project	PWC	CSE	CSE	--	--	--	--	2	50	--	50	--
10	20HU612	Constitution of India and Professional Ethics	HSMC	Humanities	Humanities	2	0	0	2	0	50	--	50	--
						Total Credits				25	Total Marks		900	

Professional Elective Course – II (3 Credits)			Open Elective Course – II (3 Credit)			Open Elective Course - III (3 Credit)		
Sl. No	Subject Code	Subject Name	Sl. No	Subject Code	Subject Name	Sl. No	Subject Code	Subject Name
1	20CS641	Natural Language Processing	1	20CS651	Introduction to Database Management System	1	20CS661	MATLAB Programming
2	20CS642	Cyber Security & Cyber Laws	2	20CS652	Python Programming	2	20CS662	Introduction to Machine Learning
3	20CS643	Block Chain Technology	3	20CS653	Fundamentals of Computer Networks	3	20CS663	Basics of Image Processing

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Semester VII

Sl. No	Subject Code	Course Title	Category Code	Teaching Department	QP Setting Dept.	Contact Hours				Credits	Marks			Exam Duration in hrs
						L	T	P	Total		CIE	SEE	Total	
1	20HU710	Management course	HSMC	CSE	CSE	4	0	0	4	4	50	50	100	03
2	20CS71X	Professional Elective - III	PEC	CSE	CSE	3	0	0	3	3	50	50	100	03
3	20CS72X	Professional Elective - IV	PEC	CSE	CSE	3	0	0	3	3	50	50	100	03
4	20CS73X	Open Elective-IV	OEC	CSE	CSE	3	0	0	3	3	50	50	100	03
5	20CS74X	Open Elective-V	OEC	CSE	CSE	3	0	0	3	3	50	50	100	03
6	20CS75P	Project Work Phase - I	PWC	CSE	--	0	0	0	0	2	50	--	50	--
7	20CS76P	Industrial training /Internship	PWC	--	--	0	0	0	1	1	50	--	50	--
						Total Credits				19	Total Marks		600	

Professional Elective Course – III (3 credits)			Professional Elective Course – IV (3 credits)		
Sl. No	Subject Code	Subject Name	Sl. No	Subject Code	Subject Name
1	20CS711	Computer Architecture	1	20CS721	Advances in AI
2	20CS712	Cryptography & Network Security	2	20CS722	Big Data Analytics
3	20CS713	Robotics and Automation	3	20CS723	Software Modeling

Open Elective Course – IV (3 credits)			Open Elective Course – V (3 Credits)		
Sl. No	Subject Code	Subject Name	Sl. No	Subject Code	Subject Name
1	20CS731	Essentials of Internet of Things	1	20CS741	Advanced Java
2	20CS732	Basics of Cyber Security	2	20CS742	Basics of Pattern Recognition
3	20CS733	Introduction to Software Engineering	3	20CS743	Introduction to Deep Learning Architecture

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Semester VIII

Sl. No	Subject Code	Course Title	Category Code	Teaching Department	QP Setting Dept.	Contact Hours				Credits	Marks			Exam Duration in hrs
						L	T	P	Total		CIE	SEE	Total	
1	20CS81X	Professional Elective-V	PEC	CSE	CSE	3	0	0	3	3	50	50	100	03
2	20CS82X	Professional Elective-VI	PEC	CSE	CSE	3	0	0	3	3	50	50	100	03
3	20CS83P	Project Work Phase-II	PWC	CSE	CSE	0	0	10	10	10	70	30	100	03
						Total Credits				16	Total Marks		300	

Professional Elective Course - V (3 Credits)			Professional Elective Course - VI (3 Credits)		
Sl. No	Subject Code	Subject Name	Sl. No	Subject Code	Subject Name
1	20CS811	Deep Learning Architecture	1	20CS821	Pattern Recognition
2	20CS812	Multimedia Computing	2	20CS822	Speech Processing
3	20CS813	Cloud Computing	3	20CS823	High Performance Computing

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