Scheme of Examination for Undergraduate programmes Subject: BCA According to Curriculum Framework for Undergraduate Programmes

Sem	Course Type	Course Code	Nomenclature of paper	Credits	Contact hours	Internal marks	End term Marks	Total Marks	Duration of exam (Hrs) T + P
1	CC-A1	B23-CAP-101	Problem Solving through C	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	CC-B1	B23-CAP-102	Foundations of Computer Science	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	CC-C1	B23-CAP-103	Logical Organization of Computer	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	СС-М1	B23-CAP-104	Mathematical Foundations for Computer Science-I	1	1	10	20	30	3
			Practical	1	2	5	15	20	3
	MDC1	To be taken from other department							
	SEC1	To be taken from SEC Pool							
	VAC1	To be taken from VAC Pool							
	AEC1	To be taken from AEC Pool							
2	CC-A2	B23-CAP-201	Object Oriented Programming using C++	3	3	20	50	70	3
			Practical	1	2	10	20	30	3

as per NEP 2020 (Multiple Entry-Exit, Internships and Choice Based Credit System)

C-82 B23-CAP-202 Introduction to rechnologies 3 3 20 50 70 3 C-62 B23-CAP-203 Concepts of partices 1 3 100 20 30 3 C-C42 B23-CAP-203 Concepts of partices 1 2 5 15 20 3 C-C42 B23-CAP-204 Concepts of partices 1 2 5 15 20 3 C-M2 B23-CAP-204 Methanatical foundations for Computer science-11 1 2 5 15 20 3 Proctical 1 Proctical 1										
CC-C2 Parating Systems B23-CAP-203 Operating Systems Concepts of Operating Systems 3 3 20 50 70 3 CC-M2 Parctical B23-CAP-204 Mathematical Foundations for Computer Science-II Mathematical Foundations for Computer Science-II 1 2 5 15 20 3 MDC-2 VAC-22 To be taken from SEC Pool 1 2 5 15 20 3 MDC-2 To be taken from SEC Pool 1 2 5 15 20 3 SEC-2 To be taken from VAC Pool 1 2 5 15 20 3 MC-2 To be taken from VAC Pool 1 2 1 1 2 1 1 2 1 1 3		CC-B2	B23-CAP-202	Web	3	3	20	50	70	3
$ \begin{array}{c c c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$				Practical	1	3	10	20	30	3
CC-M2 B23-CAP-204 Mathematical Foundations for Computer 1 10 20 30 3 MDC-2 To be taken from other department Practical 1 2 5 15 20 3 MDC-2 To be taken from other department To be taken from ACC Pool 1 2 5 15 20 3 MC-2 To be taken from ACC Pool To be taken from AEC 1 2 1		CC-C2	B23-CAP-203	Operating	3	3	20	50	70	3
MDC-2 To be taken from other department Foundations for Computer science-II 1 2 5 15 20 3 MDC-2 To be taken from other department Practical 1 2 5 15 20 3 SEC-2 To be taken from SEC Pool To be taken from SEC Pool 1 1 2 1				Practical	1	2	5	15	20	3
MDC-2 To be taken from other department SEC-2 To be taken from SEC Pool		CC-M2	B23-CAP-204	Foundations for Computer	1	1	10	20	30	3
indexfrom other departmentfrom other departmentindexindexindexindexSEC-2To be taken from SEC PoolTo be taken from VAC PoolIndexIndexIndexIndexIndexVAC-2To be taken from AEC PoolTo be taken from AECIndexIndexIndexIndexIndexIndexAEC-2To be taken from AEC PoolIndexIndexIndexIndexIndexIndexIndexIndex3CC-A3B23-CAP-301 PoolInux and Shell programmingIndexIndexIndexIndexIndexIndexIndexCC-C3B23-CAP-302 PracticalInux and Shell programmingIndexIndexIndexIndexIndexIndexIndexIndexCC-C3B23-CAP-303 PracticalIndex and Shell programmingIndexIndexIndexIndexIndexIndexIndexCC-C3B23-CAP-303 PracticalIndex and Shell programmingIndexIndexIndexIndexIndexIndexIndexCC-C3B23-CAP-303 PracticalIndex and Shell PracticalIndexIndexIndexIndexIndexIndexIndexCC-M3To be taken from other departmentIndexIndexIndexIndexIndexIndexIndexIndexMDC-3To be taken from other departmentIndexIndexIndexIndexIndexIndexIndexIndex <td></td> <td></td> <td></td> <td>Practical</td> <td>1</td> <td>2</td> <td>5</td> <td>15</td> <td>20</td> <td>3</td>				Practical	1	2	5	15	20	3
Image: series of the series		MDC-2	from other							
AEC-2 To be taken from VAC Pool Image: Constant from AEC Pool Image: Constant fr		SEC-2	from SEC							
from AEC Pool from AEC Pool lava OOP Foundations lava SOOP SOOP lava SOOP lava SOOP SOOP lava SOOP lava SOOP <thlava soop<="" th=""> lava SOOP <</thlava>		VAC-2	from VAC							
$ \begin{array}{c c c c c c c } \hline Foundations & & & & & & & & & & & & & & & & & & &$		AEC-2	from AEC							
CC-B3 B23-CAP-302 Linux and Shell programming 3 3 20 50 70 3 Practical 1 2 10 20 30 3 CC-C3 B23-CAP-303 Data Base Technologies 3 3 20 50 70 3 CC-C3 B23-CAP-303 Data Base Technologies 3 3 20 50 70 3 Practical 1 3 10 20 30 3 3 CC-C3 B23-CAP-303 Data Base Technologies 3 3 20 50 70 3 Practical 1 3 10 20 30 3 3 3 10 20 30 3 CC-M3 To be taken from other department I 3 I <td>3</td> <td>CC-A3</td> <td>B23-CAP-301</td> <td></td> <td>3</td> <td>3</td> <td>20</td> <td>50</td> <td>70</td> <td>3</td>	3	CC-A3	B23-CAP-301		3	3	20	50	70	3
Programming Image: constraint of the state of the sta				Practical	1	2	10	20	30	3
CC-C3 B23-CAP-303 Data Base Technologies 3 3 20 50 70 3 Practical 1 3 10 20 30 3 CC-M3 To be taken from other department Image: Second seco		CC-B3	B23-CAP-302		3	3	20	50	70	3
Technologies Image: Constraint of the state of the st				Practical	1	2	10	20	30	3
CC-M3 To be taken from other department Image: Comparison of the comp		CC-C3	B23-CAP-303	NAME THAT AND A DESCRIPTION OF A DESCRIP	3	3	20	50	70	3
from other department Image: Constraint of the constra				Practical	1	3	10	20	30	3
from other department		CC-M3	from other							
SEC-3 To be taken		MDC-3	from other							
		SEC-3	To be taken							

		from SEC Pool							
	AEC-3	To be taken from AEC Pool							
4	CC-A4	B23-CAP-401	Data Structures and Applications	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	CC-B4	B23-CAP-402	Front-end Development	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	CC-C4	B23-CAP-403	Computer Graphics	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	AEC-4	To be taken from AEC Pool							
	VAC-3	To be taken from VAC Pool							
	CC- M4(V)	To be taken from VOC Pool							
5	CC-A5	B23-CAP-501	Software Engineering	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	CC-B5 CC-C5	B23-CAP-502	Back-end Development	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
		B23-CAP-503	Network Infrastructure and Data Communication Technologies	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	CC- M5(V)	To be taken from VOC Pool							
	SEC-4	Internship @ 4 Credits							

6	CC-A6	B23-CAP-601	Programming using Python	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	CC-B6	B23-CAP-602	Advanced Web Development	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	CC-C6	B23-CAP-603	Artificial Intelligence	3	3	20	50	70	3
			Practical	1	2	10	20	30	3
	CC-M6	To be taken from other department							
	CC- M7(V)	To be taken from VOC Pool							
7	СС-Н1	B23-CAP-701	Principles & Paradigms of Programming Languages	4	4	30	70	100	3
	СС-Н2	B23-CAP-702	Software Testing	4	4	30	70	100	3
	СС-НЗ	B23-CAP-703	Data Mining and Warehousing	4	4	30	70	100	3
	DSE-H1	B23-CAP-704	NoSQL Databases	4	4	30	70	100	3
		Or							
		B23-CAP-705	Cyber Security	4	4	30	70	100	3
	PC-H1	B23-CAP-706	Practical	4	8	30	70	100	6
	CC-HM1	B23-CAP-707	Cloud Computing	4	4	30	70	100	3
8	CC-H4	B23-CAP-801	Design & Analysis of Algorithms	4	4	30	70	100	3
	CC-H5	B23-CAP-802	Software Project Management	4	4	30	70	100	3
	СС-Н6	B23-CAP-803	Emerging Trends in Information Security	4	4	30	70	100	3
	DSE-H2	B23-CAP-804	Big Data	4	4	30	70	100	3
		Or							
		B23-CAP-805	Machine Learning	4	4	30	70	100	3

PC-H2	B23-CAP-806	Practical	4	8	30	70	100	6
CC-HM2	B23-CAP-807	Internet of Things (IoT)	4	4	30	70	100	3
OR								
CC-H4	B23-CAP-801	Design & Analysis of Algorithms	4	4	30	70	100	3
CC-H5	B23-CAP-802	Software Project Management	4	4	30	70	100	3
CC-HM2	B23-CAP-807	Internet of Things (IoT)	4	4	30	70	100	3
Research	B23-CAP-808	Project/ Dissertation	12				300	