

## **Scheme and Syllabus for BACHELOR OF COMPUTER APPLICATIONS (BCA) Three year (Six Semester) Course**

The course of study of Bachelor of Computer Applications (BCA) shall extend over a period of **six semesters** spread over three years. On satisfactory completion of the course and after passing the examinations, a candidate will be awarded the Bachelor of Computer Applications degree.

Every academic year shall be divided into two semesters. I semester starts from July and ends in December. II semester starts from January and ends in June and so on. There shall be an examination at the end of each semester. The examinations shall consist of theory papers and practical papers.

The examination of each semester will consist of four theory papers, and three practical papers. Medium of instructions and examination will be **English** only.

### **Eligibility for admission:**

Admission procedure for I semester starts in the month of June/July every year. The admission of the BCA course should be made irrespective of the stream (Arts/Science/Commerce) a candidate must have passed 10+2 level exam of any board.

### **Examination Scheme:**

Each theory paper shall be of 100 marks (70 marks for written examination of 3 hrs duration and 30 marks for internal assessment).

Each practical paper shall be of 100 marks (70 for practical exam and 30 for internal assessment).

The basis for internal assessment in the laboratory courses shall be timely submission of the lab. Records, performance in the Lab., internal tests etc.

Each theory paper examination will be of three-hour duration and shall carry 70 marks.

Each practical examination (Maximum marks 100) will be of 4- hours duration on one day and carry 70 marks for exercise(s) assigned in the examination and Viva , and 30 marks for the Internal Assessment.

**Attendance:**

A candidate shall be required to put in a minimum of 75% attendance at the lectures and 75% attendance at the practical's separately in each paper.

**Examination Scheme**

Sr. No.	Paper	ESE	CIA	Total
1	Theory	70%	30%	100
2	Practical	70%	30%	100

**Number of Units in Syllabus**

Sr. No.	Stream	No. of Units
1	BCA	4

**Maximum Marks for the Course and Number of Units of Each  
subject 3 Years / 6 Semesters**

Sr. No	Stream	Semester	Number of Papers per semester		Total Marks of Semester	Sub Total	Grand Total
			Theory	Practical			
1	BCA	I ,II, III, IV and V Sem	4 X 100	3 X 100	400 +300 = 700	700 X 5 = 3500	3500
		VI Sem Project	4 X 100	1 X 300	400+300 = 700	700 X 1 =700	700
							<b>4200</b>

## Semester Structure (BCA)

### Semester – I

Code	Theory Papers	Teaching per week Hours	Continuous Internal Assessment (CIA)	End Semester Exam (ESE)	Exam Hours	Credits
BCA-1001	FUNDAMENTALS OF COMPUTER SCIENCE	4	30	70	3	4
BCA-1002	ELEMENTARY PHYSICS AND DIGITAL ELECTRONICS	4	30	70	3	4
BCA-1003	PROGRAMMING IN C	4	30	70	3	4
BCA-1004	ENGLISH COMMUNICATION	4	30	70	3	4
	<b>PRACTICAL PAPERS</b>					
BCA-1005P	PROGRAMMING IN C LAB.	4	30	70	4	3
BCA-1006P	OFFICE MANAGEMENT LAB.-I	4	30	70	4	3
BCA-1007P	COMMUNICATION SKILLS LAB-I	4	30	70	4	3
	<b>Total</b>	<b>28</b>	<b>210</b>	<b>490</b>	<b>24</b>	<b>25</b>

**Semester – II**

Code	Theory Papers	Teaching per week Hours	Continuous Internal Assessment (CIA)	End Semester Exam (ESE)	Exam Hours	Credits
BCA-2001	OBJECT ORIENTED PROGRAMMING CONCEPTS	4	30	70	3	4
BCA-2002	INTERNET & WEB TECHNOLOGIES	4	30	70	3	4
BCA-2003	DISCRETE MATHEMATICS	4	30	70	3	4
BCA-2004	COMPUTER ARCHITECTURE	4	30	70	3	4
	<b>PRACTICAL PAPERS</b>					
BCA-2005P	C++ LAB.	4	30	70	4	3
BCA-2006P	INTERNET & WEB LAB.	4	30	70	4	3
BCA-2007P	OFFICE MANAGEMENT LAB.-II	4	30	70	4	3
	<b>Total</b>	<b>28</b>	<b>210</b>	<b>490</b>	<b>24</b>	<b>25</b>

**Semester –III**

Code	Theory Papers	Teaching per week Hours	Continuous Internal Assessment (CIA)	End Semester Exam (ESE)	Exam Hours	Credits
BCA-3001	DATA BASE MANAGEMENT SYSTEM	4	30	70	3	4
BCA-3002	ADVANCE JAVA PROGRAMMING	4	30	70	3	4
BCA-3003	OPERATING SYSTEM FUNDAMENTALS	4	30	70	3	4
BCA-3004	SYSTEM ANALYSIS & DESIGN	4	30	70	3	4
	<b>PRACTICAL PAPERS</b>					
BCA-3005P	DATA BASE MANAGEMENT SYSTEM LAB.	4	30	70	4	3
BCA-3006P	JAVA LAB.	4	30	70	4	3
BCA-3007P	COMMUNICATION SKILLS LAB-II	4	30	70	4	3
	<b>Total</b>	<b>28</b>	<b>210</b>	<b>490</b>	<b>24</b>	<b>25</b>

**Semester –IV**

Code	Theory Papers	Teaching per week Hours	Continuous Internal Assessment (CIA)	End Semester Exam (ESE)	Exam Hours	Credits
BCA-4001	DATA STRUCTURE & ALGORITHMS	4	30	70	3	4
BCA-4002	PHP PROGRAMMING	4	30	70	3	4
BCA-4003	ADVANCE DATABASE CONCEPTS	4	30	70	3	4
BCA-4004	DATA COMMUNICATION AND NETWORKING	4	30	70	3	4
	<b>PRACTICAL PAPERS</b>					
BCA-4005P	DATA STRUCTURE LAB.	4	30	70	4	3
BCA-4006P	PHP LAB.	4	30	70	4	3
BCA-4007P	PL/SQL LAB.	4	30	70	4	3
	<b>Total</b>	<b>28</b>	<b>210</b>	<b>490</b>	<b>24</b>	<b>25</b>

**Semester – V**

Code	Theory Papers	Teaching per week Hours	Continuous Internal Assessment (CIA)	End Semester Exam (ESE)	Exam Hours	Credits
BCA-5001	COMPUTER GRAPHICS	4	30	70	3	4
BCA-5002	PROGRAMMING IN PYTHON	4	30	70	3	4
BCA-5003	E-COMMERCE APPLICATION DEVELOPMENT	4	30	70	3	4
BCA-5004	SOFTWARE ENGINEERING	4	30	70	3	4
	<b>PRACTICAL PAPERS</b>					
BCA-5005P	GRAPHICS LAB.	4	30	70	4	3
BCA-5006P	PYTHON LAB.	4	30	70	4	3
BCA-5007P	SRS REPORT PRESENTATION	4	30	70	4	3
	<b>Total</b>	<b>28</b>	<b>210</b>	<b>490</b>	<b>24</b>	<b>25</b>

**Semester – VI**

Code	Theory Papers	Teaching per week Hours	Continuous Internal Assessment (CIA)	End Semester Exam (ESE)	Exam Hours	Credits
BCA-6001	MANAGEMENT INFORMATION SYSTEM	4	30	70	3	4
BCA-6002	CYBER SECURITY	4	30	70	3	4
BCA-6003	DATA WAREHOUSING AND DATA MINING	4	30	70	3	4
BCA-6004	ELECTIVE PAPERS: <b>ARTIFICIAL INTELLIGENCE AND EXPERT SYSTEMS</b>	4	30	70	3	4
BCA-6005	ANIMATION AND MULTIMEDIA	7				
	<b>PRACTICAL PAPERS</b>					
BCA-6006P	PROJECT	12	90	210	4	9
	<b>Total</b>	<b>28</b>	<b>210</b>	<b>490</b>	<b>16</b>	<b>25</b>