

SCHEME OF EXAMINATION

&

DETAILED SYLLABUS

For

BACHELOR OF COMPUTER APPLICATIONS (BCA) DEGREE

**GURU GOBIND SINGH
INDRAPRASTHA UNIVERSITY
SECTOR-16C, DWARKA, DELHI**

Note : A Minimum of 40 Lectures is mandatory for each course.
Syllabus of Bachelor of Computer Applications (BCA), approved by BCA Coordination Committee on 26th July 2011 & Sub-Committee Academic Council held 28th July 2011. W.e.f. academic session 2011-12

Bachelor of Computer Applications

FIRST SEMESTER EXAMINATION

| Code No. | Paper | L | T/P | Credits | Marks Internal | Marks External |
|----------------------|--|-----------|-----------|-----------|----------------|----------------|
| THEROY PAPERS | | | | | | |
| BCA 101 | Mathematics – I | 3 | 1 | 4 | 25 | 75 |
| BCA 103 | Technical Communication | 3 | 0 | 3 | 25 | 75 |
| BCA 105 | Introduction to Programming Language using C | 3 | 1 | 4 | 25 | 75 |
| BCA 107 | Introduction to Computers & IT | 3 | 1 | 4 | 25 | 75 |
| BCA 109 | Physics | 3 | 1 | 4 | 25 | 75 |
| PRACTICALS | | | | | | |
| BCA 151 | Practical – I C Prog. Lab | 0 | 6 | 3 | 40 | 60 |
| BCA 153 | Practical – II IT Lab | 0 | 6 | 3 | 40 | 60 |
| BCA 155* | Communication Skills | 2 | 0 | 2 | 100 | ----- |
| | Total | 17 | 16 | 27 | 305 | 495 |

*NUES

TOTAL MARKS : 800

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SECOND SEMESTER EXAMINATION

| Code No. | Paper | L | T/P | Credits | Marks Internal | Marks External |
|----------------------|----------------------------|-----------|-----------|-----------|----------------|----------------|
| THEROY PAPERS | | | | | | |
| BCA 102 | Mathematics – II | 3 | 1 | 4 | 25 | 75 |
| BCA 104 | Principles of Management | 3 | 0 | 3 | 25 | 75 |
| BCA 106 | Digital Electronics | 3 | 1 | 4 | 25 | 75 |
| BCA 108 | Data Structure Using C | 3 | 1 | 4 | 25 | 75 |
| BCA 110 | Database Management System | 3 | 1 | 4 | 25 | 75 |
| PRACTICALS | | | | | | |
| BCA 152 | Practical – III DS Lab | 0 | 6 | 3 | 40 | 60 |
| BCA 154 | Practical – IV DBMS Lab | 0 | 6 | 3 | 40 | 60 |
| BCA 156* | Cyber Ethics | 2 | 0 | 2 | 100 | ----- |
| | Total | 17 | 16 | 27 | 305 | 495 |

*NUES

TOTAL MARKS: 800

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THIRD SEMESTER EXAMINATION

| Code No. | Paper | L | T/P | Credits | Marks Internal | Marks External |
|----------------------|--|-----------|-----------|-----------|----------------|----------------|
| THEROY PAPERS | | | | | | |
| BCA 201 | Mathematics – III | 3 | 1 | 4 | 25 | 75 |
| BCA 203 | Computer Architecture | 3 | 1 | 4 | 25 | 75 |
| BCA 205 | Front End Design Tool VB.Net | 3 | 1 | 4 | 25 | 75 |
| BCA 207 | Principles of Accounting | 3 | 0 | 3 | 25 | 75 |
| BCA 209 | Object Oriented Programming using C++. | 3 | 1 | 4 | 25 | 75 |
| PRACTICALS | | | | | | |
| BCA 251 | Practical – V .NET Lab | 0 | 6 | 3 | 40 | 60 |
| BCA 253 | Practical – VI C++ Lab | 0 | 6 | 3 | 40 | 60 |
| BCA 255* | Software Development Skills | 2 | 0 | 2 | 100 | ----- |
| | Total | 17 | 16 | 27 | 305 | 495 |

***NUES**

TOTAL MARKS: 800

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FOURTH SEMESTER EXAMINATION

| Code No. | Paper | L | T/P | Credits | Marks Internal | Marks External |
|----------------------|--------------------------------|-----------|-----------|-----------|----------------|----------------|
| THEROY PAPERS | | | | | | |
| BCA 202 | Mathematics – IV | 3 | 1 | 4 | 25 | 75 |
| BCA 204 | Web Technologies | 3 | 1 | 4 | 25 | 75 |
| BCA 206 | Java Programming | 3 | 1 | 4 | 25 | 75 |
| BCA 208 | Software Engineering | 3 | 1 | 4 | 25 | 75 |
| BCA 210 | Computer Networks | 3 | 1 | 4 | 25 | 75 |
| PRACTICALS | | | | | | |
| BCA 252 | Practical – VII Java Lab | 0 | 6 | 3 | 40 | 60 |
| BCA 254 | Practical – VIII Web Tech Lab | 0 | 6 | 3 | 40 | 60 |
| BCA 256* | Personality Development Skills | 2 | 0 | 2 | 100 | ----- |
| | Total | 17 | 13 | 28 | 305 | 495 |

***NUES**

TOTAL MARKS: 800

Summer Training will be held for 4 weeks after the end of fourth semester.

Viva-Voce will be conducted in fifth semester.

FIFTH SEMESTER EXAMINATION

| Code No. | Paper | L | T/P | Credits | Marks Internal | Marks External |
|--------------------------------------|---------------------------|-----------|-----------|-----------|----------------|----------------|
| THEROY PAPERS | | | | | | |
| BCA 301 | Operating System | 3 | 1 | 4 | 25 | 75 |
| BCA 303 | Computer Graphics | 3 | 1 | 4 | 25 | 75 |
| BCA 305 | E- Commerce | 3 | 1 | 4 | 25 | 75 |
| ***ELECTIVES (Select any One) | | | | | | |
| BCA 307 | Software Testing | 3 | 1 | 4 | 25 | 75 |
| BCA 309 | Microprocessor | 3 | 1 | 4 | 25 | 75 |
| BCA 311 | Advance Computer Networks | 3 | 1 | 4 | 25 | 75 |
| BCA 313 | Web Based Programming | 3 | 1 | 4 | 25 | 75 |
| BCA 315 | Business Economics | 3 | 1 | 4 | 25 | 75 |
| PRACTICALS | | | | | | |
| BCA 351 | Practical – IX CG Lab | 0 | 8 | 4 | 40 | 60 |
| BCA 355* | Summer Project/ Training | 0 | 0 | 2 | 100 | ----- |
| BCA 357 | Minor Project | --- | 8 | 4 | 40 | 60 |
| | | | | | | |
| | Total | 12 | 20 | 26 | 280 | 420 |

***Evaluation will be based on Summer Training held after fourth semester and will be conducted by the college committee only.**

***** Any Elective Subject will be offered if minimum 1/3 rd of the total strength of students in the class will opt for it.**

****NUES**

TOTAL MARKS: 70

Note : A Minimum of 40 Lectures is mandatory for each course.
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SIXTH SEMESTER EXAMINATION

| Code No. | Paper | L | T/P | Credits | Marks Internal | Marks External |
|--------------------------------------|---------------------------------|-----------|-----------|-----------|----------------|----------------|
| THEROY PAPERS | | | | | | |
| BCA 302 | Data Ware Housing & Data Mining | 3 | 1 | 4 | 25 | 75 |
| BCA 304 | Mobile Computing | 3 | 1 | 4 | 25 | 75 |
| BCA 306 | Linux Environment | 3 | 1 | 4 | 25 | 75 |
| ***ELECTIVES (Select any One) | | | | | | |
| BCA 308 | Multimedia & Its Applications | 3 | 1 | 4 | 25 | 75 |
| BCA 310 | Bio Informatics | 3 | 1 | 4 | 25 | 75 |
| BCA 312 | Artificial Intelligence | 3 | 1 | 4 | 25 | 75 |
| BCA 314 | Network Security | 3 | 1 | 4 | 25 | 75 |
| BCA 316 | Network Programming | 3 | 1 | 4 | 25 | 75 |
| PRACTICALS | | | | | | |
| BCA 352 | Practical – X Linux Lab | 0 | 4 | 2 | 40 | 60 |
| BCA 356 | Major Project | ---- | 10 | 5 | 40 | 60 |
| BCA 358** | Seminar | 2 | 0 | 2 | 100 | |
| | Total | 14 | 18 | 25 | 280 | 420 |

Note:

- The total number of the credits of the BCA programme = 160.
- Each student shall be required to appear for examinations in all courses. However, for the award of the degree a student shall be required to earn the minimum of 150 credits.
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Total Marks : 700

***** Any Elective Subject will be offered if minimum 1/3 rd of the total strength of students in the class will opt for it.**