

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(Revised Syllabus)

BCA(Revised Syllabus)/ASSIGN/SEMESTER-I

ASSIGNMENTS

(July - 2026 & January - 2027)

FEG-02, ECO-01, BCS-011, BCS-012, BCSL-013



**SCHOOL OF COMPUTER AND INFORMATION SCIENCES
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
MAIDAN GARHI, NEW DELHI – 110 068**

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Important Notes

1. Submit your assignments to the Coordinator of your Study Centre on or before the due date.
2. Assignment submission before due dates is compulsory to become eligible for appearing in corresponding Term End Examinations. For further details, please refer to BCA Programme Guide.
3. To become eligible for appearing the Term End Practical Examination for the lab courses, it is essential to fulfill the minimum attendance requirements as well as submission of assignments (on or before the due date). For further details, please refer to the BCA Programme Guide.

Course Code	:	BCS-011
Course Title	:	Computer Basics and PC Software
Assignment Number	:	BCA (I)/011/Assignment/2026-27
Maximum Marks	:	100
Weightage	:	25%
Last Date of Submission	:	31st October, 2026 (For July 2026 Session)
	:	30th April, 2027 (For January 2027 Session)

This assignment has three questions of 80 marks. Answer all the questions. Rest 20 marks are for viva voce. You may use illustrations and diagrams to enhance explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of presentation. Please give precise answers. The word limit for each part is 200 words.

Q1: (5×6=30 Marks)

- a) A newly established college plans to procure software for its computer laboratories. Recommend suitable *system software, application software, utility software and open-source software* for the laboratory. Justify your recommendations with suitable examples.
- b) An organization wants to migrate its software infrastructure from traditional desktop computing to client server-based. Discuss how software architecture has evolved over time and explain the advantages and challenges of adopting client server-based.
- c) Compare single-user, multitasking, multiuser, and real-time operating systems. Recommend the most suitable operating system for each of the following situations:
 - ATM system
 - College computer laboratory
 - Mobile phone
 - Scientific research workstation
- d) A software developer wants to create a payroll application. Explain how algorithm, flowchart, program, and programming language contribute to software development. Illustrate your explanation with a suitable example.
- e) A computer in your office has become slow and frequently displays warning messages about malware. Explain how utility software and antivirus software can be used to improve system performance and protect data.

Q2: (5×6=30 Marks)

- a) Prepare a professional project report using a word processor. Explain how the following features improve the quality of the document:
 - Styles
 - Table of Contents
 - Header and Footer
 - Tables
 - Mail Merge

b) A school maintains students' examination records using spreadsheets. Explain how the following spreadsheet features can be used effectively:

- Formulae
- Functions
- Cell Referencing
- Charts
- Conditional Formatting

Illustrate your answer with a suitable example

c) Design a simple database for a *Library Management System*.

Identify:

- Tables
- Fields
- Primary Keys
- Relationships

Also explain how queries and reports help library administration.

d) A software company is planning a new project involving ten developers. Explain the role of a Project Manager and discuss how project management software can assist in:

- Scheduling
- Resource Allocation
- Monitoring Progress
- Milestone Tracking

e) Compare *Compiler*, *Interpreter*, and *Assembler* with suitable examples. Explain which translation software would be more appropriate during software development and why.

Q3:

(2×10=20 Marks)

(a) Your institute plans to establish a campus-wide computer network connecting classrooms, laboratories, library, administrative offices and hostels. Design a suitable networking solution by discussing:

- Network topology
- LAN, MAN and WAN
- Networking devices (Switch, Router, Gateway, Access Point)
- Internet connectivity
- IP addressing
- Network security considerations

Support your answer with a neat diagram

(b) A student wants to build a complete digital learning environment using Internet services. Discuss how the following Internet applications can support learning:

- Web Browsing

- Search Engines
- Email
- Cloud Storage
- E-learning Platforms
- Blogs
- Social Networking
- Online Collaboration Tools

Also explain the precautions that should be taken to ensure safe and responsible use of the Internet.