Winter vacation Assignment 2026

ASSIGNMENT- 2

COMMUNICATIVE ENGLISH – BCA 102

BCA 2nd SEMESTER

INSTRUCTIONS: Complete the questions in assignment sheets neatly in 8-10 pages and submit after the winter Vacation with a proper Cover page and Index.

1. What are the barriers to effective telephone use? What is the professional approach /guidelines in handling telephone conversation?
2. What is Public Speaking ? Explain the strategies for effective Public Speaking.
3. Explain the importance of presentation. How to deliver effective presentation?
4. How to overcome nervousness in Public Speaking? What are the kinds of non-verbal communication?
5. Explain audience analysis and its importance . Discuss the elements of audience analysis.
6 .How to deliver effective powerpoint presentation? What are its advantage and disadvantages?

BCA 2nd SEM

ASSIGNMENT

DIGITAL ELECTRONICS

1. Explain Energy bands in solids.
2. What is PN junction diode? How to use diode as switch?
3. What is Bipolar Junction Transistor? How to use bipolar junction transistor as switch?
4. What are Saturated and non-saturated logic?
5. What are Integrated Circuits?
6. What are the characteristics of digital logic families TTL, ECL, CMOS?

📍*ASSIGNMENT QUESTIONS*📍

DATA STRUCTURE BCA 2ND SEC B

Ques1:- What are common operations on data structure?

Ques2:- what do you mean by algorithm? Explain its types.

Ques3:- what do you mean
by algorithm complexity? Explain space complexity and time complexity.

Ques4:- What do you mean by asymptotic notations? Explain its 5 types.

Ques5:- Write the procedure to calculate the time complexity of an algorithm.

Ques6:- What is an array? How to declare an array in a program?

Ques7:- Different types of arrays? Explain in detail.

***Ques8:-* How can an array be passed to a function? Explain with examples.**

***Ques9:-* What do you mean by linked list?How to store data using link list.**

***Ques10:-* Comparison between array and link list.**

CA 2nd Semester – Mathematics (Differential Calculus)

Assignment Questions

State Rolle's Theorem. Write all the necessary conditions required for the theorem.

State and prove Rolle's Theorem.

State Lagrange's Mean Value Theorem (LMVT).

State and prove Lagrange's Mean Value Theorem.

State Cauchy's Mean Value Theorem (CMVT).

State and prove Cauchy's Mean Value Theorem.

BCA 2nd SEM (Section A & B)

Database Management System

1. Practical file work :

a) Introduction To DBMS

b) Physical Structure OF DBMS

c) Three level architecture of DBMS

d) File operations (Insertion , Deletion , Update , Retrieve) on file with Screen SHOT

2. Handwritten Assignment Topic:

a) File Organization & types

b) B Tree

c) Draw ER diagram of following

Questions I. Library wants to keep track of its books and members. Each book has a Book ID, title, author, and publisher. Each member has a Member ID, name, and phone number.

A member can borrow multiple books, but each book can be borrowed by only one member at a time. The library also wants to record the issue date and return date for each borrowed book.

Task: Draw an ER diagram showing all entities, attributes, relationships, and cardinalities.

Question II. A college maintains information about students and courses. Each student has a Student ID, name, and department. Each course has a Course ID, course name, and credit hours.

A student can register for many courses, and each course can have many students enrolled. The college also wants to store the grade a student receives in each course.

Task: Draw an ER diagram representing this system, including appropriate relationships and attributes.

Winter vacation Assignment 2026

BCA 2nd SEM (SEC A)

ASSIGNMENT

Data Structure

1. **Prepare handwritten notes for Unit 1 and Unit 2; during checking, a viva will also be conducted.**

2. **Complete your practical file work up to Unit 2. Your file along with a viva will be checked after the winter vacation**

Winter vacation Assignment 2026

BCA 4th SEM (SEC A and B)

ASSIGNMENT

IT and WEB

3. **Prepare handwritten notes for Unit 1 and Unit 2; during checking, a viva will also be conducted.**

4. **Complete your practical file work up to Unit 2. Your file along with a viva will be checked after the winter vacation**

BCA0405 – Programming in Visual Basic

Practical File Questions (15 Experiments)

UNIT – I : Visual Studio & Form Design

1. Create a Windows Forms application to display your name, course, and university using Labels and Buttons. Demonstrate the use of Form properties and control properties.

2. Design a form that demonstrates the use of TextBox, Label, Button, and MessageBox. On button click, display the entered text in a MessageBox.

3. Create an application to demonstrate default events of controls. Use a Button Click event and write readable code with proper comments.

4. Design a form using Document Outline View and demonstrate proper naming conventions for controls.

UNIT – II : Data Types, Strings & Control Structures

5. Write a program to declare and initialize variables and constants and perform arithmetic operations (addition, subtraction, multiplication, division).

6. Create a program to demonstrate type conversion using:
    - Built-in Visual Basic conversion functions
    - Methods to convert numeric data to formatted strings
7. Develop a program to concatenate and append strings entered by the user and display the formatted output.
8. Write a program using If–Else and Select Case statements to create a simple calculator.
9. Create a program to demonstrate For Loop and Do Loop by printing numbers from 1 to 10 and calculating their sum.

UNIT – III : Procedures, Events & Exception Handling

10. Write a program using Sub and Function procedures to calculate Simple Interest. Pass arguments ByVal and ByRef.
11. Create an application to demonstrate multiple event handling using a single event handler.
12. Write a program to demonstrate exception handling using:
    - Try
    - Catch

- Finally
  Display appropriate error messages using MessageBox.

13. Develop a program to validate user input using:

    - IsNumeric function

    - Validating event
      and display error messages for invalid input.

UNIT – IV : Arrays, Controls & Debugging

14. Write a program to demonstrate the use of:

    - One-dimensional array

    - Rectangular array

    - Jagged array
      Display all values using loops.

15. Create a multi-form application where:

    - One form collects user details

    - Second form displays the details

    - Use MessageBox and FormClosing event

    - Demonstrate basic debugging using breakpoints

BCA 4nd SEM

PERSSONAL ASSIGNMENT

BCA 4{SEM}

UNIT-1

1. Define personnel management and discuss its managerial and operative functions.

2.Explain personnel policies: nature, scope, significance, classification, and organization of the personnel departmenT.

3.Discuss advantages of personnel policies and their role in the organization chart.

UNIT-2

1.What is Human Resource Planning? Discuss its meaning, objectives, and importance.

2.Explain Recruitment, Selection, Induction, and Placement with their processes.

3.Write short notes on: (i) Job Analysis, (ii) Job Design models.

UNIT-3

1.Describe Human Resource Development (HRD): need, significance, training, and development.

2.Explain Promotion policies: essentials of a sound promotion policy.

3.Discuss incentives, retirement benefits, and their role in employee motivation.

UNIT-4

1.What is Performance Appraisal? Discuss its methods and linkage to job design.

2.Explain Job Evaluation: objectives, process, and its purpose in wage/salary administration.

3.Describe Employee Remuneration and various incentive plans.

6TH SEM (SEC A)

SOFTWARE ENGINEERING

1. **What is Requirements Engineering,? What are the various types of Requirements**
2. **Explain in brief the following terms:**
    i. **Feasibility Studies**
    ii. **Requirements Elicitation**
    iii. **Requirements Analysis Documentation**
    iv. **Validation and Management.**
3. **What is Software Architecture and Its Role?**
4. **What are Views in software architechture?**
5. **Define :**
    i. **Architecture Vs Design,**
    ii. **Documentation,**
    iii. **Evaluation.**

6TH SEM (SEC B)

SOFTWARE ENGINEERING

1- Explain the changing role of software engineers in the context of emerging technologies and increasing software complexity.

2- Describe the Spiral Model of software development. Why is it considered a risk-driven model?

3- What is Software Requirements Specification (SRS)? Explain the characteristics of a good SRS document.

4- Discuss the importance of requirements validation and verification in preventing software project failures.

5- Explain the concept of feasibility analysis in software engineering. How does it help management in decision-making?

6th Sem (Section B)

Holiday ASSIGNMENT

Computer Networking

1.Explain the following error detection techniques with two examples each:

- **Parity check**
- **CRC (Cyclic Redundancy Check)**
- **VRC /LRC**
- **Checksum**

2. Explain Unguided Media in Detail.

3. Draw neat diagrams of:

- **Star, Bus, Ring, and Mesh topology**

- **Twisted-pair cable and fiber optic cable**

Assignment Multimedia
Sec A &

B.

1.Briefly explain categories of multimedia.
2.How multimedia impacts the public sector.
3.Discuss various stages of multimedia design.
4.Explain various symbols used in logic flowchart.
5.Define sequence in MIDI system
6.Discuss various sound attributes in detail.
7.How to edit a Digital sound. Explain.
8.Discuss importance of animation in multimedia projects.
9.Compare 2d & 3d animation.
10.What is Staging in animation?

Winter vacation Assignment 2026

BCA 6th SEM (SEC A and B)

ASSIGNMENT

Computer Graphics

5. **Prepare handwritten notes for Unit 1 and Unit 2; during checking, a viva will also be conducted.**

6. **Complete your practical file work up to Unit 2. Your file along with a viva will be checked after the winter vacation**

Computer Network Assignment

Course: BCA 6th Semester
Subject: Computer Network
Section: A

Q1. What is a Computer Network? Explain its advantages.

Q2. Types of Computer Networks

Q3. Explain Network Topology

Q4. Explain Transmission Media

BCA 4th Semester Section – A and B

Q1. Explain SDLC in detail with a neat diagram.

Q2. Describe the feasibility study in detail with suitable examples.

Q3. Explain Data Flow Diagrams (DFD) with symbols and levels.

Numerical Methods – Assignment Questions (BCA 6th Semester)

1. Use the Bisection Method to find a real root of the equation
2. $x3-x-1=0$
3. x
4. 3
5. $-x-1=0$
6. correct up to three decimal places.
7. Apply the Newton–Raphson Method to find a root of
8. $xcosx-sinx=0$
9. $xcosx-sinx=0$
10. taking a suitable initial approximation.
11. Using the Regula–Falsi Method, find the root of
12. $x3-4x-9=0$
13. x
14. 3
15. $-4x-9=0$
16. correct up to two decimal places.
17. Solve the system of linear equations using the Gauss Elimination Method:
18. $2x+y-z=8-3x-y+2z=-11-2x+y+2z=-3$
19. $2x+y-z=8$
20. $-3x-y+2z=-11$
21. $-2x+y+2z=-3$
22. Find the solution of the following system using the Gauss–Seidel Iteration Method:
23. $10x-y+2z=6-x+11y-z=252x-y+10z=-11$
24. $10x-y+2z=6$
25. $-x+11y-z=25$
26. $2x-y+10z=-11$