

DIPLOMA OF COMPUTER APPLICATION (1st Semester)

ASSIGNMENTS



**Centre for Distance and Online Education
Guru Jambheshwar University of Science
& Technology, Hisar – 125001
(2026-2027)**

CENTRE FOR DISTANCE AND ONLINE EDUCATION

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Course Name: Problem Solving Using C

Semester: 1st

Code: DCA-11-T

Total Marks: 30

Important Instructions:

1. Attempt all questions from each assignment given below.
2. Each assignment carries 15 marks.
3. All questions are to be attempted in legible handwriting on plain white A-4 size paper and upload the scanned copy of the assignments on the LMS portal.

ASSIGNMENT-I

Q1. Explain the role and importance of algorithms in problem-solving. Describe the basic characteristics of a good algorithm with a suitable example.

Q2. Explain the C character set, tokens, identifiers and keywords. Discuss the rules for writing valid identifiers with suitable examples.

Q3. Explain different types of operators in C, including arithmetic, relational, logical and assignment operators. Illustrate their use with suitable expressions.

ASSIGNMENT-II

Q1. Explain the concept of functions in C. Discuss function declaration, definition, parameters and function calling with a suitable example. Also explain recursion.

Q2. Explain one-dimensional and two-dimensional arrays in C. Discuss the relationship between arrays and pointers with a suitable example.

Q3. Explain structures and unions in C. Differentiate between them and describe their applications with suitable examples. Also briefly explain the basic steps involved in file handling in C.

Prepared By:

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CENTRE FOR DISTANCE AND ONLINE EDUCATION
GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Course Name: PC Software
Code: DCA-12-T

Semester: 1st
Total Marks=30

Important Instructions

- i Attempt all questions from each assignment given below.**
- ii Each assignment carries 15 marks.**
- iii All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on LMS portal.**

ASSIGNMENT-I

- Q1. Define an operating system and discuss its primary functions. How does MS Windows exemplify these functions in its user interface?
- Q2. Describe the basic components of the Windows operating system, including the taskbar, icons, and title bar. Explain how users can manage files and folders effectively.
- Q3. Explain the process of creating and formatting documents in MS Word. Discuss the role of macros and Mail Merge in enhancing document preparation.

ASSIGNMENT-II

- Q1. Discuss the key features of MS Excel, including essential operations, formulas, and functions. Explain how to create and use Pivot Tables in data analysis.
- Q2. What are the different network topologies? Compare the OSI and TCP/IP reference models in terms of their layers and functions.
- Q3. Identify various networking devices such as routers and switches and explain their roles in a network.

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**CENTRE FOR DISTANCE AND ONLINE EDUCATION
GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR**

Course Name: Web Designing
Paper Code: DCA-13-T

Semester: 1st
Max. Marks: 30

Important Instructions:

- 1) Attempt all questions from each assignment given below.
- 2) Each assignment carries 15 marks.
- 3) All questions are to be attempted in legible handwriting on plane white A-4 size paper and same is uploaded through login your account.

ASSIGNMENT - 1

- Q1. What is the Internet and World Wide Web? Discuss the evolution and history of the World Wide Web and its major features.
- Q2. Explain web browsers and web servers in detail. Discuss their functions, working, and role in accessing and delivering web pages over the Internet.
- Q3. What is a Home Page? Explain its importance in website design. Discuss the important factors that should be considered while planning and designing an effective home page.

ASSIGNMENT - 2

- Q1. Explain the history, purpose, and basic structure of HTML. Discuss the important features of an HTML document with a suitable example.
- Q2. Explain table creation in HTML. Discuss the different HTML tags and attributes used for creating and formatting tables
- Q3. What is XML? Explain the basic concepts and features of XML.

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CENTRE FOR DISTANCE AND ONLINE EDUCATION

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Course Name: Operating System

Semester: 1st

Code: DCA-14-T

Total Marks: 30

Important Instructions:

1. Attempt all questions from each assignment given below.
2. Each assignment carries 15 marks.
3. All questions are to be attempted in legible handwriting on plain white A-4 size paper and upload the scanned copy of the assignments on the LMS portal.

ASSIGNMENT-I

Q1. Define an Operating System. Explain its major functions and discuss the different types of Operating Systems with suitable examples.

Q2. What is multiprogramming? Explain the concept of multiprocessing and differentiate between multiprogramming and multiprocessing.

Q3. What is CPU scheduling? Explain pre-emptive and non-pre-emptive scheduling with suitable examples. Discuss the importance of CPU scheduling in an Operating System.

ASSIGNMENT-II

Q1. What is a deadlock? Explain the basic conditions required for a deadlock to occur. Discuss the methods of deadlock prevention, avoidance, detection and recovery.

Q2. Explain virtual memory and thrashing. Discuss their causes, effects and role in memory management.

Q3. Compare UNIX and Windows Operating Systems on the basis of user interface, security, file management, system usage and major features

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CENTRE FOR DISTANCE AND ONLINE EDUCATION

GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

Course Name: Object Oriented Programming Using C++

Semester: 1st

Code: DCA-15-T

Total Marks: 30

Important Instructions:

1. Attempt all questions from each assignment given below.
2. Each assignment carries 15 marks.
3. All questions are to be attempted in legible handwriting on plain white A-4 size paper and upload the scanned copy of the assignments on the LMS portal.

ASSIGNMENT-I

Q1. Explain the basic principles of Object-Oriented Programming. Discuss the concepts of encapsulation, abstraction, inheritance and polymorphism with suitable examples.

Q2. What is a class and an object in C++? Explain their relationship and describe how data members and member functions are used with a suitable example.

Q3. Explain constructors and destructors in C++. Discuss their purpose, types and execution with suitable examples.

ASSIGNMENT-II

Q1. What is inheritance in C++? Explain the different access specifiers (public, private, protected) in the context of base and derived classes. Provide an example illustrating their use.

Q2. Outline the basic exception handling mechanism in C++. Explain the roles of try, throw, and catch with a code example that demonstrates how to handle exceptions in a function.

Q3. Describe the process of file handling in C++. Explain how to create, read, update, and manage both sequential and random-access files.

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CENTRE FOR DISTANCE AND ONLINE EDUCATION
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HISAR

Course Name: Problem solving using C Language Lab.
Code: DCA-16-P

Semester: 1st
Max. Marks: 30

Important Instructions

1. Attempt these experiments/assignments.
2. All assignments are to be completed either in legible handwriting on plain white A4-size paper or typed in a Word file, along with appropriate screenshots of the output of the respective assignments. Practical file must be uploaded on the LMS portal.

List of experiments/assignments:

1. Understand the logic for a given problem.
2. Write the algorithm of a given problem.
3. Draw a flow chart of a given problem.
4. Recognize and understand the syntax and construction of C programming code.
5. Gain experience of procedural language programming.
6. Know the steps involved in compiling, linking and debugging C code.
- Understand using header files.
8. Learn the methods of iteration or looping and branching.
9. Make use of different data-structures like arrays, pointers, structures and files.
10. Understand how to access and use library functions.
11. Understand function declaration and definition.
12. Understand proper use of user defined functions.
13. Write programs to print output on the screen as well as in the files.
14. Apply all the concepts that have been covered in the theory course.
15. Know the alternative ways of providing solution to a given problem.

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Course Name: PC Software Lab
Code: DCA-17-P

Semester: 1st
Max. Marks: 30

Important Instructions

1. Attempt any ten experiments/assignments.
2. All assignments are to be completed either in legible handwriting on plain white A4-size paper or typed in a Word file, along with appropriate screenshots of the output of the respective assignments. Practical file must be uploaded on the LMS portal.

List of experiments/assignments:

- Q1. Write down the step to create user account in Window.
- Q2. Write down the step to add printer in window.
- Q3. Write down the step to page setup, print preview and print any document file in MS-Word.
- Q4. Write down the step to insert, select, delete, merge, split and sort table in MS-Word.
- Q5. Write down the step to create Mail Merge in MS-Word.
- Q6. Apply the creating, editing, saving, printing securing and protecting operations to an excel spreadsheet.
- Q7. Prepare a bar chart and pie chart for analysis of five-year results of your institute.
- Q8. Work on the following exercise on a Workbook:
 - a. Copy an existing sheet
 - b. Rename the old sheet
 - c. Insert a new sheet into an existing Workbook.
 - d. Delete the renamed sheet
- Q9. Create a excel worksheet and perform computations using available data and using mathematical functions chosen from menus.
- Q10. Prepare an attendance sheet of 10 students for any 5 subjects of your syllabus. Calculate their total attendance, total percentage of attendance of each student and average of attendance in next worksheet.
- Q11. Create a worksheet on students list of any 4 faculties and perform following database functions on it.
 - a. Sort data by Name
 - b. Filter data by Class
 - c. Subtotal of number of students by class.
- Q12. Apply themes and layouts to power point slides and insert pictures, graphics, shapes, and tables into presentations.
- Q13. In power point slide make use of adding transitions and animations and working with master slides.
- Q14. How to create Master slide for presentation.
- Q15. Do experiments with some basic internet related DOS commands.

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HISAR

Course Name: Web Designing Lab.
Code: DCA-18

Semester: 1st
Max. Marks: 30

Important Instructions

1. Attempt any **Ten** experiments/assignments.
2. All assignments are to be completed either in legible handwriting on plain white A4-size paper or typed in a Word file, along with appropriate screenshots of the output of the respective assignments. Practical file must be uploaded on the LMS portal.

List of experiments/assignments:

1. Create a simple webpage using HTML.
2. Designing of registration form with table and use of hyperlink.
3. Design a page with frames to include Images and Videos.
4. Add a cascading style sheet for designing the web page.
5. Use user defined function to get array of values and sort them in ascending order on web page.
6. Design a dynamic web page with validation of form field using JavaScript.
7. Design a simple Login form.
8. Event Handling Validation of registration form.
9. Open a Window from the current window on Mouse Over event.
10. Create a simple application to demonstrate the use of get and post methods.
11. Demonstrate Array Objects and Date Object's predefined methods.
12. Display calendar for the month and year selected from combo box.
13. Create a welcome Cookie (Hit for a page) and display different image and text content everytime when the user hit the page.
14. Demonstrate Request and Response object using Java Script in HTML Form.
15. Design a page to display all the values in the HTML table from XML File.