

CENTRE FOR DISTANCE AND ONLINE EDUCATION
GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR
DIPLOMA IN COMPUTER APPLICATION

Course Name: Problem Solving Using C
Code: DCA-11-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. Explain the importance of algorithms in problem-solving. Illustrate your answer with a flowchart that represents the steps to find the largest of three numbers.
- Q2. Describe the C character set and explain the significance of identifiers and keywords in C programming. Provide examples of valid and invalid identifiers.
- Q3. Differentiate between arithmetic and logical operators in C. Provide examples of expressions using both types of operators, and explain how control statements (if-else and switch) can be used to make decisions in a program.

ASSIGNMENT-II

- Q1. Define a function in C. Discuss how parameters are passed to functions and the concept of recursion. Write a recursive function to calculate the factorial of a number and explain its working.
- Q2. Explain the relationship between pointers and arrays in C. Illustrate your answer by writing a program that demonstrates how to use pointers to manipulate array elements.
- Q3. Describe how structures are defined and processed in C. Explain the concept of unions and how they differ from structures. Additionally, outline the steps to open, create, and close a data file in C, including an example of reading from an unformatted data file.

Prepared By:
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CENTRE FOR DISTANCE AND ONLINE EDUCATION
GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR
DIPLOMA IN COMPUTER APPLICATION

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

Semester: 1st
Total Marks=30

Important Instructions

- iv Attempt all questions from each assignment given below.**
- v Each assignment carries 15 marks.**
- vi 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.

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

Diploma in Computer Application

Course Name: Web Designing

Semester: 1st

Paper Code: DCA-13-T

Total Marks: 30

Important Instructions

- **Attempt all questions from each assignment given below.**
- **Each assignment carries 15 marks.**
- **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 student's portal.**

ASSIGNMENT - 1

- Q1. What do you understand by internet? Explain its important features. 5
- Q2. What is a web browser? Discuss in detail about searching and web casting techniques. 5
- Q3. Explain the various steps involved in developing a website. 5

ASSIGNMENT - 2

- Q1. Explain the important features of HTML documents. 5
- Q2. Create a HTML web page with the help of list, table and Frame. 5
- Q3. Explain the structure and syntax of XML. 5

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GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

CENTRE FOR DISTANCE AND ONLINE EDUCATION

DIPLOMA IN COMPUTER APPLICATION

Course Name: Operating System

Code: DCA-14-T

Semester- 1st

Total Marks: 30

Important Instructions

- vii Attempt all questions from each assignment given below.**
- viii Each assignment carries 15 marks.**
- ix 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 - 1

- Q1. What is Operating System? Explain different types of OS. 5
- Q2. Differentiate between Multiprocessor and Multiprogramming. 5
- Q3. Define CPU scheduling? Describe the difference between pre-emptive and non-pre-emptive scheduling algorithms. Discuss in detail. 5

ASSIGNMENT – 2

Q1. Short Note on:

- 1. Deadlock detection and recovery.
- 2. Deadlock prevention and avoidance 5

Q2. Explain the various terms:

- 1. Virtual Memory
- 2. Thrashing 5

Q3. Differentiate between UNIX and Windows based operating systems. 5

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CENTRE FOR DISTANCE AND ONLINE EDUCATION
GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR
DIPLOMA IN COMPUTER APPLICATION

Course Name: Object Oriented Programming Using C++
Code: DCA-15-T

Semester: 1st
Total Marks=30

Important Instructions

- x Attempt all questions from each assignment given below.**
- xi Each assignment carries 15 marks.**
- xii 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 the four core concepts of Object-Oriented Programming (OOP) in C++. Provide a brief explanation and an example for each concept.**
- Q2. Discuss the differences between a class and a struct in C++. Explain how they are structured in memory and provide an example of accessing members of both.**
- Q3. Explain dynamic memory allocation in C++ using new and delete. Write a short code snippet that demonstrates the allocation and deallocation of memory for an array of integers.**

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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