

**GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR**

**DIRECTORATE OF DISTANCE EDUCATION**

**PRACTICAL LIST FOR EVEN SEMESTERS**

**(PGDCA/MCA/MSC (CS))**

**SEMSTER – 2<sup>nd</sup>**

**Programme: PGDCA/MCA/MSC (CS)**

**Code: MS-10**

**Course: Practical (Based on MS-06)**

**Max Marks: 100**

## **Data Structure and Algorithms (Based on MS-06)**

1. Write a C program that uses functions to perform the following stack operations:  
a) Push          b) Pop          c) Display the contents
2. Write a C program that uses functions to perform the following circular queue operations:  
a) Insert an element   b) Delete an element          c) Display the contents
3. Write a C program that uses functions to perform the following:  
a) Create a singly linked list of integers.  
b) Insert an integer in the above linked list in the beginning.  
c) Insert an integer in the above linked list in the end.  
d) Insert an integer in the above linked list before a given element.  
e) Insert an integer in the above linked list after a given element.  
f) Display the contents of the above list after every insertion.
4. Write a C program that uses functions to perform the following:  
a) Create a singly linked list of integers.  
b) Delete an integer from the beginning of above linked list.  
c) Delete the last integer from the above linked list.  
d) Delete a given integer from the above linked list.  
e) Display the contents of the above list after every deletion.
5. Write a C program that uses functions to perform the following:  
a) Create a binary search tree of characters.  
b) Traverse the above Binary search tree recursively in Preorder, Inorder and Postorder.
6. Write C programs for implementing the following sorting methods to arrange a list of integers in ascending order:  
a) Quick sort   b) Selection sort
7. Write C programs for implementing the following searching methods:  
a) Linear Search   b) Binary search
8. Write a C program that accepts the vertices and edges for a graph and stores it as an adjacency matrix. Implement functions to print indegree, outdegree and to display the adjacency matrix.

**Prepared By: Dr. Jyoti  
Assistant Professor  
Deptt. of CSE  
GJUS&T, Hisar**

**Programme: PGDCA/MCA/MSC (CS)**

**Code: MS-10**

**Course: Practical (Based on MS-09)**

**Max Marks: 100**

## **Business data processing (Based on MS-09)**

1. Write a program to display your name 5 times using Perform Times.
2. Write a program to find the factorial of a given number.
3. Write a program to check whether the given number is prime or not.
4. Write a program for reading sequential files.
5. Write a program to count the number of records in a sequential file.
6. Write a program to update records in a sequential file.
7. Write a program for sorting a sequential file.
8. Write a simple program to demonstrate Add Corresponding.
9. Write a simple program to demonstrate Condition names usage.
10. Write a program to find interest on deposits.

**Prepared By: Mr. Vinod Goyal**  
**Assistant Professor**  
**GJUS&T, Hisar**

**SEMSTER – 4<sup>th</sup>**

**Programme: Programme: MCA/MS (CS)**

**Code: MS-20**

**Course: Practical (Based on MS-17)**

**Max Marks: 100**

## **Object Oriented Programming using C++ LAB**

1. Write a Program that uses a class where the member functions are defined inside the class.
2. Write a program that uses a class where the member functions are defined outside a class.
3. Write a program to demonstrate the use of static data members.
4. Write a program to demonstrate the use of zero argument and parameterized constructors.
5. Write a program demonstrate the use of dynamic and explicit constructor.
6. Write a program to demonstrate the overloading increment and decrement operators.
7. Write a program to demonstrate the overloading of memory management operators.
8. Write a program to demonstrate the multilevel inheritance.
9. Write a program to demonstrate the multiple inheritances.
10. Write a program to demonstrate the runtime polymorphism.

**Prepared By: Mr. Vinod Goyal**  
**Assistant Professor**  
**GJUS&T, Hisar**

**Programme: Programme: MCA/MS (CS)  
Code: MS-20**

**Course: Practical (Based on MS-18)  
Max Marks: 100**

## **Internet and Web Programming Lab**

1. Write a HTML page to print Hello world in bold and italic font.
2. Create a HTML file which displays 3 images at Left, Right and Center respectively in the browser.
3. Create a static web page which defines all text formatting tags of HTML in tabular format.
4. Create a webpage using list tags of HTML.
5. Create employee registration webpage using HTML form objects.
6. Write a program using Applet to display a message in the Applet.
7. Write a program using Applet for configuring Applets by passing parameters.
8. Write a program to create an applet with moving banner.
9. Write a program to basic calculator using Applet and Event Handling.
10. Write a program to create simple chat application using TCP based Socket Programming.

**Prepared By: Mr. Narender Kumar  
Assistant Professor  
Deptt. of CSE  
GJUS&T, Hisar**