

Q.1 A) Select correct alternative and rewrite the following:

1. ----- is not a process state in Operating system. 01
 - i. Ready ii. Running
 - iii. Exited iv. Blocked
2. Tree is a ----- collection of nodes 01
 - i. Hierarchical ii. Linear
 - iii. Relational iv. Graphical
3. We cannot define more than one ----- in a class. 01
 - i. Constructor ii. Destructor
 - iii. Member function iv. Data member
4. The ----- attribute of of HTML is used to change bullets of the list. 01
 - i. START ii. VALUE
 - iii. BULLETS iv. TYPE

B) Answer any two of the following:

1. What are the services provided by operating system? 03
2. List any six operations performed with data structure. 03
3. List the different types of data types used in C++ with example. 03

Q.2 A) Answer any two of the following:

1. Explain the following operations of file management 03
 - i. Create a file ii. Writing a file iii. Delete a file
2. Write an algorithm to insert an element into an array. 03
3. What is constructor? Give an example. 03

B) Answer any one of the following:

1. What is virus? Explain any two infection methods of virus 04
2. Explain following tags of HTML with its attribute and suitable example. 04
 - i. <A> ii.

Q.3 A) Answer any two of the following:

1. What is GUI? Explain any two elements of GUI. 03
2. What is multiprogramming and context switching in process management of operating system? 03
3. Give two examples of declaring member functions 03
 - i. Inside the class ii. Outside the class

B) Answer any one of the following:

1. What is paging? Explain using example and diagram of page table, logical memory and physical memory 04
2. What is binary tree? With suitable example, give the linked representation of binary tree in memory. 04

Q.4 A) Answer any two of the following:

1. Write an algorithm for traversing the array. 03
2. With an algorithm for traversing library functions 03
 - i. Strcpy() ii. Strcmp()
3. Give any six rules of operator overloading. 03

B) Answer any one of the following:

1. Define security of operating system. Describe the elements of security. 04
2. Draw the binary tree for following expression: $E = ((a+b)-c)*(e/g)$ 04

Q.5 Answer any two of the following:

1. Write a program in C++ to display the following output using for loop 05
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
2. Write a program in C++ to declare the array of 10 floats and find the largest. 05
3. Write output of the following HTML code. 05

```
<html>
<head><title>ABC</title></head>
<body>
<hr>
<center> COMPUTER SCIENCE</center>
<hr>
<ol>
<li> Operating system </li>
<li> Data structure </li>
<li> C++ </li>
</ol>
</body>
</html>
```

OR

1. Write a program in C++ to accept a string from keyboard and find the length of the string without using library function. 05
2. Write a program in C++ to accept two integer number in main () and find the sum of those number using function. 05
3. Write HTML code to display following output 05

Tuesday	
March	18
2006	
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