COMPUTER SCIENCE – 1   OCTOBER 2014

Q.1 A) Select correct alternative and rewrite the following:
1. ------- is free software.   01
    - i.   UNIX
    - ii. DOS
    - iii. LINUX
    - iv. WINDOWS

2. Finding location of given element in array is called --------   01
    - i.   Sorting
    - ii. Searching
    - iii. Traversing
    - iv. Merging

3. In C++, ------- is an extraction operator.   01
    - i.   <<
    - ii. >>
    - iii. &&
    - iv. !

4. In HTML, ------ is not a paired tag.   01
    - i.   <B>
    - ii. <I>
    - iii.
    - iv. <TABLE>

B) Answer any two of the following:
1. What is call by reference? Explain with suitable example.   03
2. What is linked list? Explain with suitable example.   03
3. Explain the following tag of HTML with example.   03
    - i. <PRE>   ii. <OL>   iii. <MARQUEE>

Q.2 A) Answer any two of the following:
1. Give the features of LINUX operating system.   03
2. What are the basic services provided by operating system?   03
3. With suitable explain local and global variable in C++.   03

B) Answer any one of the following:
1. Write an algorithm to sort the elements of array using bubble sort method.   04
2. What is polymorphism? Give and define their types with example.   04

Q.3 A) Answer any two of the following:
1. Draw the binary tree for the following expression : E= ((a+b) + (b-c)) / e   03
2. Define the following term of data structure   03
    - i. Field   ii. Record   iii. File
3. What is constructor? Give its syntax and two rules to define constructor.   03

B) Answer any one of the following:
1. Explain the following term in regard of virtual memory.   04
    - i.   Page fault
    - ii. Working set
    - iii. Demand paging
    - iv. Dirty bit
2. Give the basic structure of HTML program. State it's any two advantages and   04
    disadvantages.

Q.4 A) Answer any two of the following:
1. Explain contiguous allocation method in information management. Give any two   03
    advantages.
2. Explain the following control structure and their types used in data structure.   03
    - i. Selection   ii. Loop
3. What is an array? How they are represented in memory? Explain with example.   03

B) Answer any one of the following:

1. List and explain the types of memory partitioning use in memory management of operating system. 04

2. What is class? Give the basic structure to define the class with example. 04

Q.5 Answer any two of the following:

1. Write a program in C++ to initialize the array of 10 integers and find the sum of all the elements of array. 05

2. Write a program in C++ to accept a line from keyboard and count total number of blank spaces in a line. The program should print the original string and blank spaces. 05

3. Write HTML code to display the following output. 05

SHIVAJI COLLEGE, PUNE		
	XI	XI
BOYS	15	20
GIRLS	20	15

OR

1. Write a program in C++ to accept three numbers from keyboard and find the smallest one and print it. 05

2. Write a program in C++ to initialize the array to 10 floats and print all the array elements using pointer. 05

3. Write the exact output of the following HTML code. 05

```
<html>
<head>
<title> code </title>
</head>
<body>
<h1> Languages </h1>
<ol><li> English </li>
<li> Second languages…. </li></ol>
<ul><li> Marathi </li>
<ul><li> Hindi </li>
<ul><li> French</li></ul>
<li> Sanskrit >/li>
</ul></ul>
</body>
</html>
```