| 2015 | III | 12 | 1100 | V – 634 | (E) |

COMPUTER SCIENCE
PAPER - I (D-9)

| Time : 3 Hours | 4 Pages | Max. Marks : 50 |

Instructions : *(1) All questions are compulsory.*

(2) Figures to the right indicate full marks.

(3) Use of any type of calculator is not allowed.

(4) Draw a neat diagram wherever necessary.

1.   (A)   Select correct options from the following and rewrite sentences :

(a)   The time required to move R/W Head to the particular track is called _____.

(i)   Latency Time

(ii)   Seek Time

(iii)   Waiting Time

(iv)   Response Time

(b)   _____ data structure does not require contiguous memory allocation.   **1**

(i)   Array

(ii)   String

(iii)   Pointer Array

(iv)   Linked List

(c)   Object Oriented Programming uses _____ approach of Programming.   **1**

(i)   Linear

(ii)   Non-linear

(iii)   Top down

(iv)   Bottom up

(d) The valid attribute of \<A\> is _____. 1

    (i) NAME

    (ii) SRC

    (iii) BGCOLOR

    (iv) HEIGHT

(B) Answer **any two** of the following :

(a) What is Virtual Memory ? Explain any two elements of Virtual Memory. 3

(b) What is Data Structure ? Define Array and Pointer Array in data structure. 3

(c) Give function of following tags with an example of each : 3

    (i) \<IMG\>

    (ii) \<EM\>

    (iii) \<DL\>

2. (A) Answer **any two** of the following :

(a) Give three differences between WORM and VIRUS. 3

(b) Write an algorithm to find smallest element in an Array. 3

(c) Define the following terms in C++ : 3

    (i) Data Abstraction

    (ii) Operator Overloading

    (iii) Data Encapsulation

(B) Solve **any one** of the following :

(a) What is System Call ? List any two System Calls for Memory Management, Process Management and Information Management. 4

(b) What is Virtual Function in C++ ? Give any six rules to write Virtual Functions. 4

3. (A) Solve **any two** of the following :

(a) Explain Multiuser and Time Sharing Operating Systems. 3

(b) Define : 3

    (i) Tree

    (ii) Binary Tree

    (iii) Extended Binary Tree

(c) What is Function Overloading ? Give examples of Function Overloading. 3

(B) Solve **any one** of the following :

    (a) Write an algorithm for Binary Search Method. Explain algorithm with suitable example. **4**

    (b) What is Constructor and Destructor in C++ ? Give example of Constructor and Destructor in a class. **4**

4. (A) Solve **any two** of the following :

    (a) What is File System ? List and explain types of File Systems used in OS. **3**

    (b) With suitable example explain how tree can be represented in Memory ? **3**

    (c) What is Inheritance ? Explain any two types of Inheritances with Memory. **3**

(B) Solve **any one** of the following :

    (a) Give features of Windows 98 Operating System. **4**

    (b) What is Linked List ? How they can be represented in Memory ? **4**

5. Solve **any two** of the following :

    (a) Write a program in C++ to accept two integer values in main function, pass them to function great( ) using call by value and find greater number, function great( ) should not return any value. **5**

    (b) Write a program in C++ to accept three integers from keyboard and find greatest number with using Condition Control. **5**

    (c) Write output of the following HTML program : **5**

```
<HTML>
     <HEAD> <TITLE> abc </TITLE> </HEAD>
     <body>
     <H1 align = "center"> KBC Restaurant </H1>
     <TABLE border = 2>
<TR> <TH Rowspan = "2">
          <Font Size = "5"> Pawbhaji </font>
     </TH>
     <TH> with cheese </TH>
     <TH> 35
```

```
        </TR>
            <TR>
                <TH> without cheese
                <TH> 25
            </TR>
            </TABLE>
        </Body>
        </HTML>
```

OR

5. Answer **any two** of the following :

(a) Write a program in C⁺⁺ to accept a string from keyboard and copy string into another string without using the Library Function.　　**5**

(b) Write a program in C⁺⁺ to find area of circle using class.　　**5**

(c) Write a program in HTML for the following output :　　**5**

　　(i)　Arts

　　　　A. History

　　　　B. Geography

　　(ii)　Science

　　　　I. Computer Science

　　　　II. Physics

　　(iii)　Commerce

　　　　O English

　　　　O Accounts

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