| 2024 | III | 12 | | 1100 | **V – 264** | (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 not allowed.*

(4) *Draw a neat diagram whenever necessary.*

1. Select the correct alternative and rewrite the sentence :

(a) _____ tag is used for scrolling the text on WebPage.   1

(i)   <Head>

(ii) <UL>

(iii) <MARQUEE>

(iv) <SUP>

(b) _____ is a free operating system.   1

(i)   Unix

(ii) Windows

(iii) LINUX

(iv) DOS

(c) _____ is a mechanism to achieve run time polymorphism.   1

(i)   Operator Overloading

(ii) Virtual Function

(iii) Function Overloading

(iv) Constructor

(d) Finding the location of given element is called as _____. 1

    (i) Searching

    (ii) Sorting

    (iii) Traversing

    (iv) Inserting

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

    (a) Explain the following components of GUI : 3

        (i) Menu Bar

        (ii) Scroll Bar

        (iii) Title Bar

    (b) Write three distinct differences between Array and Linked List. 3

    (c) Write any three advantages and disadvantages of HTML. 3

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

    (a) Define Data Structure. Explain any four operations of Data Structure. 3

    (b) Write any three distinct differences between Procedure Oriented and Object Oriented Programming. 3

    (c) Write an algorithm to insert an element into linear array. 3

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

    (a) Defined following term of operating system : 4

        (i) External Priority

        (ii) Internal Priority

        (iii) Purchase Priority

        (iv) Time Slice

    (b) Write declaration statements in C++ for : 4

        (i) Pointer to float type

        (ii) An array of 10 real numbers

        (iii) An array of 80 characters

        (iv) An object of class student

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

  (a) Explain following tags with example :   **3**

    (i)

    (ii)   <PRE>

    (iii)   <U>

  (b) What is the function of Information Management ? List any four system call in it.   **3**

  (c) What is Constructor ? Write any four rules for constructor function.   **3**

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

  (a) What is Binary Tree ? Draw Binary Tree for following expression :   **4**

$$Y = (A + B) / (C - D)^2$$

  (b) Explain in short, any four ways by which system security can be attacked.   **4**

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

  (a) What is Class ? Explain general form of class declaration.   **3**

  (b) What is Partitioning ? Explain fixed and variable partitioning of short.   **3**

  (c) Write the function of each of the following file stream classes :   **3**
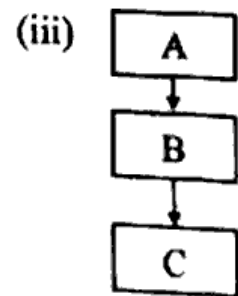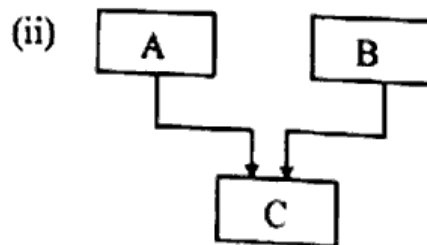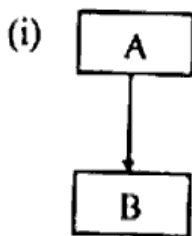
    (i)   ifstream ;

    (ii)   ofstream

    (iii)   filebuf

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

  (a) What is Inheritance ? Identify the types of inheritance of following diagram :   **4**

    (i)   A → B

    (ii)   A, B → C

    (iii)   A → B → C

  (b) What is Virtual Memory ? Explain following terms in virtual memory :   **4**

    (i)   page fault

    (ii)   dirty page

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

(a) Write a program in C++ to find Greatest Common Devisor (GCD) of two inputted number.   5

(b) Write a program in C++ to accept 10 integers in an array from keyboard and find largest element of array.   5

(c) Write HTML program for following table :   5

<div align="center">

IND v/s ENG

IND 387	Yuvraj 183*
	Dhoni 83
ENG 238	Peterson 58
	Bopara 49
IND WIN by 149 Runs	

</div>

OR

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

(a) Write a program in C++ to create a class test having member functions getmarks ( ) to read marks of two subjects and showsum ( ) to display the total marks.   5

(b) Write a program in C++ to read three integers and find smallest of these numbers.   5

(c) Write HTML code to display following output :   5

LIST tag in HTML

- Arts
    1. Hindi
    2. Marathi
- Commerce
    - Tally
    - Accounts
- Science
    A. Physics
    B. Chemistry

m