

DAY - 19

SEAT NUMBER

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2026

III

06

1100

V - 734

(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 following :

(a) Windows NT is \_\_\_\_\_ operating system. 1

- (i) Multiuser
- (ii) Multitasking
- (iii) Multithreading
- (iv) All of above

(b) The most efficient search algorithm is \_\_\_\_\_. 1

- (i) Binary search
- (ii) Reverse search
- (iii) Linear search
- (iv) Pointer search

(c) A derived class with several base classes is \_\_\_\_\_ inheritance. 1

- (i) single
- (ii) multiple
- (iii) multilevel
- (iv) hierarchical

- (d) To place the image into HTML File \_\_\_\_\_ attribute is used in <IMG> tag. 1
- (i) URL
  - (ii) ALT
  - (iii) SRC
  - (iv) HREF
- (B) Answer **any two** of the following :
- (a) Write any two system calls of information management, process management, memory management. 3
  - (b) What is Data Structure ? List different types of linear and nonlinear datastructure. 3
  - (c) Enlist different built in data types in C++ with their size. 3
2. (A) Answer **any two** of the following :
- (a) Give difference between call by value and call by reference. 3
  - (b) What is Record ? How records are represented in memory using array ? 3
  - (c) What is Operating System ? Write any four functions of operating system. 3
- (B) Answer **any one** of the following :
- (a) What is Inserting ? Write algorithm for inserting an element to a linear array. 4
  - (b) Explain following terms in brief :
    - (i) Tape - based file system
    - (ii) Disk - based file system 4
3. (A) Answer **any two** of the following :
- (a) Explain following tag with suitable example : 3
    - (i) <B>
    - (ii) <P>
    - (iii) <Font> 3
  - (b) Explain use of scope resolution operator with suitable example. 3
  - (c) Define Datastructure. List and explain any four datastructure operations. 3

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

(a) Define following terms with respect to disk-based file system : 4

- (i) Track and Sector
- (ii) Seek time
- (iii) Transmission time
- (iv) Latency time

(b) State any eight rules for overloading operators. 4

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

(a) Give any six features of Linux Operating System. 3

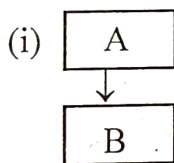
(b) Write any six features of object oriented programming. 3

(c) Draw a binary tree structure for expression : 3

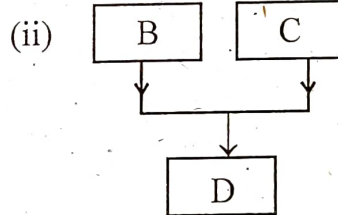
$$(2A + B) / (5F - D)^3$$

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

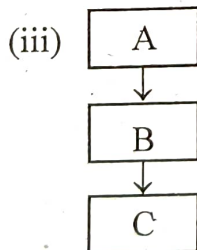
(a) Identify following inheritance : 4



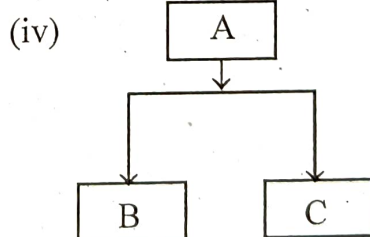
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(b) What is Partitioning ? Give any three differences between Fixed Partitioning and Variable Partitioning. 4

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

(a) Write a c++ program to find factorial of a number input during program execution. 5

(b) Write a program in C++ that inputs and stores 10 numbers in an array and print sum of array elements. 5

(c) Write HTML code for following table : 5

| H.S.C. Result 2024 |       |       |
|--------------------|-------|-------|
| State              | Boys  | Girls |
| Maharashtra        | 98.7% | 99%   |
| Gujarat            | 96%   | 98%   |
| Bihar              | 99%   | 97%   |
| Kerala             | 99%   | 96%   |

**OR**

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

(a) Write a program in C++ to reverse a positive integer number inputted from keyboard. 5

(b) Write a program in C++ using object oriented programming technique to find area of circle. 5

(c) Write HTML Code for following definition list : 5

Atomic Number

Total number of electron  
in an atom is called

Atomic Number

Mass Number

Total number of nucleons  
in an atom is called

Mass Number

Valence Electron

Total number of electron  
in an outermost orbit  
is called Valence electron