

Time: 3 Hours]

[Max. Marks: 75

**Note:** Answer **all** questions from **Part A**.

Answer **any** five questions from **Part B**.

**PART – A [MARKS 25]**

1. Draw the block diagram of a computer.
2. Explain about memory concepts.
3. Show how binary searching will proceed if an array A contains the values [7, 20, 80, 92, 123, 971] and the value to be searched is 7?
4. What are the advantages of inline function?
5. Why do you use # define?
6. Write a program to use different formats of typecasting and display the converted values.
7. Discuss briefly about function overloading.
8. List the properties of friend function.
9. Explain access specifiers with their scope.
10. Explain multipath inheritance.

**PART – B [MARKS 50]**

11. a) Write a flow chart to print numbers from 160 to 1 , i.e., in reverse order.  
b) Write a program that reads the gender (male or female) and age of 100 voters and prints the average male voters age and average female voters age.
12. a) Write a recursive function to compute  $a^n$  where 'a' is real and 'n' is a positive integer.

Compare it with an interactive solution.

Recursive definition

$$a^n = a \times a^{n-1} \quad \text{if } n > 0$$

$$a^n = 1 \quad \text{if } n = 0$$

- b) Write a program to find out the largest and smallest elements in a 1 dimensional array.
13. Write a program to write text file. Read the text from the file end of file. Display the contents of file in reverse order?
14. Write a program to create a text file. Add and modify records in the text file. The record should contain name, age and height of a boy/girl.
15. Write a program to overload + operator for performing addition of two template based class objects.
16. Write a program to overload unary operator using friend function.
17. Write a program to use exception handling with constructor and destructor.

*HowToExam.com*