



(3 Hours)

[Total Marks : 100

- N. B. :** (1) Question No. 1 is **compulsory**.
(2) Solve any **four** questions out of **remaining**.

1. (a) Justify "Java language is 100% object oriented programming language. 4
 (b) Explain shift operator by giving example. 4
 (c) Describe multidimensional array. 4
 (d) What is main Thread ? 4
 (e) Describe Applet Skeleton. 4

2. (a) Write a program to demonstrate the use of command line Arguments. 5
 (b) Write a program to add the list of items using vector and delete an item in the list according to user's choice. 5
 (c) What is difference between overloading and overriding ? 5
 (d) Describe AWT Classes. 5

3. (a) Write a program to display following tree : 5

```

      * * * *
      * * *
      * *
      *
```


 (b) What is accessibility of the public method or field inside a non public class ? 5
 (c) Describe static keyword by giving example. 5
 (d) Write a program to demonstrate access protection in different packages. 5

4. (a) In a method invocation, does Java pass argument by reference or by value. 10
 (b) Describe constants in interfaces along with example. 5
 (c) How to use package and its naming convention ? 5

5. (a) Write a program to display whether the inputted number is prime or not. 5
 (b) Describe throw and throws statement by giving example. 5
 (c) Write a program to create Thread by extending 'Thread Class'. 5
 (d) Write a program to check the font name and font size of string by passing parameters to applet. 5

6. (a) Write a program to open "note pad" using Java application program. 5
 (b) Write a program for matrix addition. 5
 (c) Write a program to demonstrate try and multiple catches. 5
 (d) What is meaning of monitor with respect to synchronization ? 5

7. (a) Write a program to demonstrate overloaded constructor. 5
 (b) Describe the different methods of vector class. 5
 (c) Write a program to demonstrate multiple inheritance. 5 *Style*
 (d) List the names of packages along with its Classes and Methods. 5