

Time: 3 Hours

Max. Marks: 75

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit.

Each question carries 10 marks and may have a, b, c as sub questions.

**PART - A****(25 Marks)**

- 1.a) Differentiate between break and continue statement. [2]
- b) What is type casting? Explain with an example. [3]
- c) What is the use of super keyword? [2]
- d) Distinguish between abstract class and concrete class. [3]
- e) What are the advantages of multithreading? [2]
- f) Explain the types of exceptions. [3]
- g) List the hash table constructors. [2]
- h) Explain the methods defined by Vector. [3]
- i) Explain the use of layout managers. [2]
- j) Explain the life cycle of an applet. [3]

**PART - B****(50 Marks)**

- 2.a) Write a java program to find the factorial of a given number. [5+5]
  - b) Explain the different types of constructors with an example.
- OR**
- 3.a) Write a program to find the transpose of a given matrix. [5+5]
  - b) Explain the scope and life time of the variable.
- 4.a) Explain the different parameter passing mechanisms used in Java with an example. [5+5]
  - b) Write a runtime polymorphism program in Java by using interface reference variable.
- OR**
- 5.a) Design an interface called Shape with methods draw() and getArea(). Further design two classes called Circle and Rectangle that implements Shape to compute area of respective shapes. Use appropriate getter and setter methods. Write a java program for the same. [5+5]
  - b) Explain the various access specifiers are used in java.
- 6.a) Write a program that demonstrate the priority setting in threads. [5+5]
  - b) Write a program that includes a try block and a catch clause which processes the arithmetic exception generated by division-by-zero error.
- OR**
- 7.a) Write a program that creates a thread that forces preemptive scheduling for lower-priority threads. [5+5]
  - b) Explain the checked and unchecked exception with an example.

8.a) Explain the types of drivers used in JDBC.

b) Write a program to implement the operations of random access file. [5+5]

OR

9.a) Explain the file management using File class.

b) Write a program which stores a list of strings in an ArrayList and then displays the contents of the list. [5+5]

10.a) Describe about various components in AWT.

b) Write an applet program to handle all mouse events. [5+5]

OR

11.a) Write a Java program to create AWT radio buttons using check box group.

b) Explain the various event listener interfaces. [5+5]

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