(Com. to CSE, IT)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (Part-A and Part-B)

- 2. Answer ALL the question in Part-A
- 3. Answer any **THREE** Questions from **Part-B**

PART-A

- 1. a) What is Object Oriented Programming? How it is different from Procedural concepts?
 - b) What is an Object? How to allocate memory for objects?
 - c) Can a method be overloaded based on different return type but same argument type?
 - d) What is the purpose of Alive () function in Java.
 - e) "Java class can be used both as an applet as well as an application" Support this statement with an example.
 - f) What are the different types of controls available in AWT?
 - g) What are assertions?
 - h) "Interfaces are able to extend more than one Interface but a Class can't extend more than one Class" Why? (4M+4M+2M+4M+2M+4M)

PART - B

- 2. a) Explain briefly the following object oriented concepts.
 - i) Abstraction
- ii) Polymorphism
- b) "Java is called Machine Independent language" Justify this statement with proper explanation. (8M+8M)
- 3. a) Write a Java program to sort a given set of strings in the alphabetical order where the strings are supplied through the command line.
 - b) What do you mean by static class and static method? Can we make an instance of an abstract class? Justify your answer with an example? (8M+8M)
- 4. a) What are the different forms of inheritance? Explain.
 - b) How Packages differ from Interfaces? Explain it with a suitable example program to calculate student marks statement. (8M+8M)
- 5. a) Write a Java program that prints numbers from 1 to 10 line by line after every 5 seconds
 - b) What is thread synchronization? Discuss with an example.

(8M+8M)

- 6. a) Write a Java program to create a combo box which includes list of subjects. Copy the subjects in text field on click using applet.
 - b) Differentiate between init() and start() methods with examples.

(8M+8M)

- 7. a) Write a Java program to illustrate the use of Flow Layout Manager.
 - b) Write a short note on the following i) JList ii) JScrollPane

(8M+8M)

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PART-A

- 1. a) Write a short note on the features of Object Oriented Programming
 - b) List out the characteristics of the static method.
 - c) What is the difference between an interface and an abstract class?
 - d) What is the importance of synchronization in java?
 - e) What is the role of layout manager in AWT or Swing?
 - f) What are the ways in which we can pass parameters to the applet?
 - g) What are the advantages of event driven programming?
 - h) "Java does not support operator loading" Support this statement with appropriate reasoning. (4M+4M+2M+4M+2M+4M+4M)

PART - B

- 2. a) Write a Java program to generate a pyramid of numbers for given number N using for loop.
 - b) Discuss on the advantages and disadvantages of Object Oriented Programming.

(8M + 8M)

- 3. a) Write a Java program to accepts a file name as command line argument and finds
 The Length of the longest line in the file and displays an error message if the file
 Does not exist.
 - b) Explain various access specifies supported by Java with an example

(8M+8M)

- 4. a) Write a java program to illustrate "Constructor Overloading".
 - b) What are the various types of exceptions available in Java? Also discuss on how they are handled? (8M+8M)
- 5. a) Write a Java program for creating four threads to perform the following operations
 - i) Getting N numbers as input
- ii) Printing the even numbers
- iii) Printing the odd numbers
- iv) Computing the average
- b) Explain how communication between threads takes place with a programming example.

(8M+8M)

- 6. a) Write Applets programs to accomplish the following tasks:
 - i) Drawing polygons ii) Drawing a line graph.
 - b) Can applet class have a constructor? Justify your answer with proper explanation and example. (8M+8M)
- 7. a) Discuss in detail Menu bars and menus in Java with examples.
 - b) Write a short note on the following
 - i) JFrame ii) JTabbedPane

(8M + 8M)

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PART-A

- 1. a) "Write Once and Run Anywhere" Support this statement with proper reasoning.
 - b) What is a constructor? When does the compiler supply default constructor for a class?
 - c) Differentiate between array and vector with examples.
 - d) What is a daemon thread?
 - e) What is an event? What methods are available to handle events in java?
 - f) List out the differences between AWT and Swings.
 - g) Give an example to illustrate the use of parseInt() method?
 - h) What is the difference between the >> and >>> operators?

(4M+4M+2M+4M+4M+4M+2M)

PART - B

- 2. a) Write a Java program to interchange the rows and columns of a given matrix.
 - b) Write short note on the following Object Oriented concepts
 - i) Encapsulation ii) dynamic binding

(8M + 8M)

- 3. a) Discuss various control structures available in Java.
 - b) Write a program to perform the following functions using classes, objects, constructors and destructors wherever necessary
 - i) Read 5 subjects marks of 5 students
 - ii) Calculate the total and print the result on the screen

(8M+8M)

- 4. a) Explain Creating Packages and Accessing a Package with examples.
 - b) Write a Java program to find the area and perimeter of square and circle using interface.

(8M+8M)

- 5. a) Explain the following with necessary code snippets
 - i) Creating thread ii) Stopping and Blocking a Thread
 - b) "Threads can be given priorities" Support this statement with suitable example. (8M+8M)
- 6. a) Describe the different stages in the life cycle of an Applet.
 - b) Explain in brief the event-handling mechanism in java with an example. (8M+8M)
- 7. a) Explain about any two Layout Managers with example programs.
 - b) Explain the features of Swings in java.

(8M+8M)

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PART-A

- 1. a) Write a Java program to find the value of n!, where n is a given integer.
 - b) Illustrate type casting in java with an example.
 - c) Differentiate between sleep () and wait ().
 - d) Discuss various methods used to create threads?
 - e) What is source and listener in java event handling?
 - f) List the features of swings.
 - g) "Abstract classes can be defined without any abstract methods" support this statement with proper reasoning.
 - h) What is the difference between & operator and && operator?

(4M+2M+4M+4M+4M+2M)

PART - B

- 2. a) Write a Java program to check whether a given number is palindrome or not?
 - b) Explain about Java Tokens with examples.

(8M+8M)

- 3. a) Write a java program to simulate the operation of numerical calculator to perform the functions Addition (+), Subtraction (-), Multiplication (*) and Division (/).
 - b) Explain clearly about how Java handles cleaning up of unused objects.

(8M+8M)

- 4. a) Explain about Exception Handling in Java with examples.
 - b) Why do constructors does not have any return type? Explain it with proper example.

(8M+8M)

- 5. a) Write a Java program to demonstrate multithreading operation.
 - b) Explain various thread states and properties in detail.

(8M+8M)

- 6. a) Write an applet program that has different shapes in it.
 - b) Explain action event with suitable example.

(8M+8M)

- 7. a) Explain any two AWT controls in java with suitable examples.
 - b) Design a screen in Java which accepts text in text box. If the left mouse is clicked, convert the text to uppercase and if the right button is clicked, convert it to lower case.

(8M+8M)