Printed Page:- 04 **Subject Code**:- **ACSE0402**

Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: IV - THEORY EXAMINATION (2023 - 2024)

Subject: Object Oriented Techniques Using Java

Time: 3 Hours **Max. Marks: 100**

General Instructions:

IMP: *Verify that you have received the question paper with the correct course, code, branch etc.*

1. *This Question paper comprises of* **three Sections -A, B, & C.** *It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.*

2. *Maximum marks for each question are indicated on right -hand side of each question.*

3. *Illustrate your answers with neat sketches wherever necessary.*

4. *Assume suitable data if necessary.*

5. *Preferably, write the answers in sequential order.*

6. *No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.*

SECTION A **20**

1. Attempt all parts:-

1-a. Redefining of information is (CO1) 1

(a) Inheritance

(b) Encapsulation

(c) Abstraction

(d) Polymorphism

1-b. The main aim of OOPS is to (CO1) 1

(a) bind the code and data

(b) bind the class and object

(c) bind the code only

(d) bind the data only

1-c. Garbage Collection is --------- process. (CO2) 1

(a) Automatic

(b) Manual

(c) Realistic

(d) None of the above

1-d. The feature that allows the same operations to be carried out differently depending on the object (CO2) 1

(a) polymorphism

(b) polygamy

(c) inheritane

(d) multitasking

1-e. Which of the following statement is correct? (CO3) 1

(a) replace() method replaces all occurrences of one character in invoking string with another character.

(b) replace() method replaces only first occurances of a character in invoking string with another character.

(c) replace() method replaces all the characters in invoking string with another character.

(d) replace() replace() method replaces last occurrence of a character in invoking string with another character.

1-f. Which of these keywords must be used to handle the exception thrown by try block in some rational manner? (CO3) 1

(a) try

(b) finally

(c) throw

(d) catch

1-g. method of FileReader class is used to read characters from a file (CO4) 1

(a) read()

(b) scanf()

(c) get()

(d) getInteger()

1-h. Which of these classes are used by Byte streams for input and output operation? (CO4) 1

(a) Input Stream

(b) InputOutputStream

(c) Reader

(d) All of the mentioned

1-i. Which of these events generated when a button is pressed? (CO5) 1

(a) ActionEvent

(b) WindowEvent

(c) ItemEvent

(d) KeyEvent

1-j. A _____ dictates the style of arranging the components in a container. (CO5) 1

(a) border layout

(b) grid layout

(c) panel

(d) layout manager

2. Attempt all parts:-

2.a. Can we hide data in OOPS? If yes, elaborate. (CO1) 2

2.b. Define Abstract class. (CO2) 2

2.c. Implement a constructor with parameters in a Java class. (CO3) 2

2.d. Explain the drawbacks of creating Thread by using Thread class. (CO4) 2

2.e. Define layout manager. (CO5) 2

SECTION B **30**

3. Answer any <u>five</u> of the following:-

3-a. Explain the benefits of Inheritance. (CO1) 6

3-b. Explain the four pillars of OOPS. (CO1) 6

3-c. Compare overloading and overriding of methods in java using proper examples. (CO2) 6

3-d. Identify the steps to create objects in java. How the members of a class can be accessed? (CO2) 6

3.e. Can a class declare as private be accessed outside its package explain with example. (CO3) 6

3.f. Explain the concept of multithreading in java and explain how even and odd numbers can be printed by using multithreading concept. (CO4) 6

3.g. Sketch AWT Hierarchy and explain. (CO5) 6

SECTION C **50**

4. Answer any <u>one</u> of the following:-

4-a. Explain if condition with its syntax and an example. (CO1) 10

4-b. Define command line arguments. Why are they important? Justify your answer 10

with suitable example. (CO1)

5. Answer any <u>one</u> of the following:-

5-a. Multiple inheritance is not supported through class in Java, but it is possible by an interface. Why? Use suitable example to support the answer. (CO2) 10

5-b. Explain Constructor Overloading with the help of a suitable program. (CO2) 10

6. Answer any <u>one</u> of the following:-

6-a. Write a short note on the use of throw, throws and finally. (CO3) 10

6-b. Explain the working of append method of string buffer class. Write a program which demonstrates append method. (CO3) 10

7. Answer any <u>one</u> of the following:-

7-a. Write a simple JAVA program to create threads. (CO4) 10

7-b. Write a JAVA program for creating, applying and accessing annotation. (CO4) 10

8. Answer any <u>one</u> of the following:-

8-a. Write a JAVA program to implement mouse events. (CO5) 10

8-b. Explain the process of accessing collection through iterator with the help of JAVA code. (C05) 10