NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)
B.Tech
SEM: III - THEORY EXAMINATION (2024 - 2025)
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.   Sharing of information is [CO1,K1]   1

   (a)   Inheritance
   (b)   Encapsulation
   (c)   Abstraction
   (d)   Polymorphism

1-b.   Which of the following are not Java keywords ? [CO1,K1]   1

   (a)   double
   (b)   switch
   (c)   then
   (d)   instanceof

1-c.   We cannot create a subclass of _____ class. [CO2,K1]   1

   (a)   Abstract
   (b)   public
   (c)   static
   (d)   final

1-d.   Which concept allows you to reuse the written code? [CO2,K1]   1

   (a)   Encapsulation
   (b)   Abstraction
   (c)   Inheritance

(d) Object

1-e. Name of java compiler is _____?[CO3,K1]   1

    (a) javac

    (b) java

    (c) java -d

    (d) None of the above

1-f. Which constructor is used to create an empty String object?[CO3,K1]   1

    (a) String(String str)

    (b) String()

    (c) String(String helper)

    (d) All of the mentioned

1-g. class can be used to implement the input stream that uses a character array as the source[CO4,K1]   1

    (a) BufferedReader

    (b) FileReader

    (c) CharArrayReader

    (d) FileArrayReader

1-h. The two basic streams used are[CO4,K1]   1

    (a) input and output streams.

    (b) in and out streams.

    (c) input and out streams.

    (d) in and output streams.

1-i. The unique feature of LinkedHashSetis _____ . [CO5,K1]   1

    (a) It is not a valid class

    (b) It maintains the insertion order and guarantees uniqueness

    (c) It provides a way to store key values with uniqueness

    (d) The elements in the collection are linked to each other.

1-j. The difference between TreeSet and SortedSet _____ . [CO5,K1]   1

    (a) TreeSet is more efficient than SortedSet

    (b) SortedSet is more efficient than TreeSet

    (c) TreeSet is an interface; SortedSet is a concrete class

    (d) SortedSet is an interface; TreeSet is a concrete class

2. Attempt all parts:-

2.a. What does the static keyword mean? [CO1,K1]   2

2.b. What is a parameterized Constructor? [CO2,K1]   2

2.c. How is a String stored in memory?[CO3,K1]   2

2.d. Describe Java Input/output Streams.[CO4,K2]   2

2.e.	What is an event and what is the method available for button click event? [CO5,K2]	2

SECTION-B 30

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

3-a.	Justify the key difference between class and object with example.Explain [CO1,k2]	6
3-b.	Differentiate between break and continue. [CO1,k3]	6
3-c.	What is an object in Java and how is it created? [CO2,k2]	6
3-d.	What is hybrid inheritance? [CO2,k1]	6
3.e.	Write a program to compare two string in java [CO3,K4]	6
3.f.	Write a syntax to create an annotation.[CO4,K3]	6
3.g.	Construct Wrapper Class with the help of example. [CO5,K3]	6

SECTION-C 50

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

4-a.	Write a program to check whether the number entered by user is positive or negative or zero by using if-else-if ladder. [CO1,K5]	10
4-b.	Write a program that takes values of length and breadth of a rectangle from user and check if it is a square or not by using if-else statement. [CO1,K5]	10

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,K3]	10
5-b.	Explain Constructor Overloading with the help of a suitable program? [CO2,K3]	10

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

6-a.	What is string buffer class? How is it different from string class?[CO3,K4]	10
6-b.	What is package .Explain how you will create a package write all steps to create and import a package.[CO3,K3]	10

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

7-a.	Write a program for writing the data of two files testin1.txt and testin2.txt into another file.[CO4,K3]	10
7-b.	Write a JAVA program to read all character using FileInputStream.[CO4,K3]	10

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

8-a.	Compare and Contrast between Iterator and ListIterator. [CO5,K4]	10
8-b.	Explain a Generic Type Parameter? Also write a program to implement method as a generic type. [CO5,K3]	10