NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B,Tech.

SEM: III - THEORY EXAMINATION (2022 - 2023)

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.   Which of the following are not Java keywords ? (CO1)   1

    (a) double

    (b) switch

    (c) then

    (d) instanceof

1-b.   A class that is derived from another class is called a (CO1)   1

    (a) super class

    (b) sub class

    (c) parent class

    (d) base class

1-c.   Which of the following is correct way of inheriting class A by class B? (CO2)   1

    (a) class B + class A { }

    (b) class B inherits class A { }

    (c) class B extends A { }

(d) class B extends class A { }

1-d.   A function that returns no values to the program that calls it ,is known as ? (CO2)   1

       (a) not allowed in java

       (b) type void

       (c) type empty

       (d) type barren

1-e.   Which of these keywords is not a part of exception handling?(CO3)   1

       (a) try

       (b) finally

       (c) thrown

       (d) catch

1-f.   Exception is a (CO3)   1

       (a) class

       (b) interface

       (c) Abstract class

       (d) other

1-g.   Method(s) to define/create a thread is(are)(CO4)   1

       (a) Sub classing the Thread class

       (b) Runnable interface

       (c) Both Subclassing and Runnable interface

       (d) none of the above

1-h.   Identify the correct way to implement Runnable interface.(CO4)   1

       (a) public interface Runnable { public abstract void run(); }]

       (b) public class Runnable{ private abstract void run(); public abstract void thread(); }]

       (c) private abstract Runnable{ public abstract void run();}]

       (d) All of the mentioned

1-i.   AWT stands for ? (CO5)   1

       (a) All Window Toolkit

       (b) Abstract Work Toolkit

       (c) Abstract Window Toolkit

       (d) Abstract Window Text

1-j.   A checkbox is a control that consists of a_____. (CO5)   1

         (a) Combination of a small box

         (b) A label

         (c) Combination of a large box and a label

         (d) Both a & b

2. Attempt all parts:-

2.a.   Explain the word "Inheritance". (CO1)   2

2.b.   Describe the usage of "super" keyword. (CO2)   2

2.c.   Write short notes on Exception class.(CO3)   2

2.d.   Differentiate between run() and start() method.(CO4)   2

2.e.   What are differences between Swing and AWT? (CO5)   2

<div align="center">SECTION B   30</div>

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

3-a.   Explain decision making statements. (CO1)   6

3-b.   Explain the working of switch statement. (CO1)   6

3-c.   Explain Abstract class concept with an example program. (CO2)   6

3-d.   What is inheritance? What are its types? (CO2)   6

3.e.   Using try catch, write a java program to illustrate exception handling for divide by zero.   6
            (CO3)

3.f.   Explain the types of thread with example.(CO4)   6

3.g.   Construct Wrapper Class with the help of example. (CO5)   6

<div align="center">SECTION C   50</div>

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

4-a.   Explain for loop with its syntax and an example. (CO1)   10

4-b.   Write a program to disply the messgae which is given as input from the user (use scanner   10
            class) (CO1)

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

5-a.   Write a program for multilevel inheritance in java. (CO2)   10

5-b.   Write a program to print elements of Array ? (CO2)   10

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

6-a.   Write one Java program having keyword throws, try, throw,catch, finally(CO3)   10

6-b.   Write a program to find the maximum occurring character in a given String?(CO3)   10

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

7-a.   Write a JAVA program for writing String to a file.(CO4)   10

7-b.   Write a JAVA program to read all character using FileInputStream.(CO4)   10

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

8-a.   Compare Array and ArrayList with example(CO5)   10

8-b.   Analyze swing and what are the methods of component class in Java Swing? (CO5)   10