Printed Page:- 04   **Subject Code**:- **ACSE0302**

Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: III - CARRY OVER THEORY EXAMINATION - AUGUST 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.*

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SECTION A   **20**

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1. Attempt all parts:-

1-a.   What is a Loop in Java programming language? [CO1]   1

            (a) A Loop is a block of code that is executed repeatedly as long as a condition is satisfied.

            (b) A Loop is a block of code that is executed only once if the condition is satisfied.

            (c) A Loop is a block of code that is executed more than 2 times if the condition is satisfied.

            (d) None of these

1-b.   What is the output of the below Java program with FOR loop?   1
           for(int j=0; j<5; j++)
           System.out.print(j + ","); [CO1]

            (a) 1,2,3,4

            (b) 0,1,2,3,4

            (c) Compiler error

            (d) 0,1,2,3,4,

1-c.   Overloaded functions are required to? [CO2]   1

        (a) have the same return type

        (b) have the same number of parameters

        (c) perform the same basic functions

        (d) None of the above

1-d.   Which of these is an incorrect Statement? [CO2]   1

        (a) It is necessary to use new operator to initialize an array

        (b) Array can be initialized using comma separated expressions surrounded by curly braces

        (c) Array can be initialized when they are declared

        (d) None of the mentioned

1-e.   Choose the correct syntax of a Java Package below.[CO3]   1

        (a) package PACKAGE_NAME;

        (b) package PACKAGE_NAME.*;

        (c) pkg PACKAGE_NAME;

        (d) pkg PACKAGE_NAME.*;

1-f.   _____method of class String is used to extract a single character from a String   1
object?[CO3]

        (a) CHAR AT()

        (b) charat(){}

        (c) charAt()

        (d) ChatAt()[]

1-g.   Identify the state that is not the part of thread life cycle[CO4]   1

        (a) dead

        (b) runnable

        (c) running

        (d) none of the above

1-h.   classes can return more than one character to be returned to input   1
stream[CO4]

        (a) BufferedReader

        (b) Bufferedwriter

        (c) PushbachReader

        (d) CharArrayReader

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

        (a) ActionEvent

        (b) WindowEvent

        (c) ItemEvent

        (d) KeyEvent

1-j.   Which exception is thrown by the getConnection() method of the   1
DriverManager class?[CO5]

        (a) ConnectionNotFoundException

        (b) IOException

        (c) SQLException

        (d) ReadException

2. Attempt all parts:-

2.a.   Explain sub class. [CO1]   2

2.b.   What is overriding of methods? [CO2]   2

2.c.   Which are the ways to access package from another package? Explain with   2
example.[CO3]

2.d.   Explain the concept of countDownLatch.[CO4]   2

2.e.   List down the major advantages of the Generic Collection. [CO5]   2

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SECTION B   **30**

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

3-a.   Explain the working of if-else-if ladder. [CO1]   6

3-b.   Explain the importance of using break in switch statement. [CO1]   6

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

3-d.   What is the difference between java method and java constructor ? [CO2]   6

3-e.   Explain the difference between arithmetic exception and null pointer exception   6
in java with the help of suitable example ?[CO3]

3.f.   write a program for @Deprecated Annotation.[CO4]   6

3.g.   Construct HashMap and TreeMap Context. [CO5]   6

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SECTION C   **50**

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

4-a.   Explain continue statement with its syntax and an example. [CO1]   10

4-b.   Discuss different levels of access specifiers available in JAVA. [CO1]   10

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

5-a. Explain constructor. How do we invoke constructor in JAVA? Support your answer with example. [CO2] 10

5-b. Write a JAVA program to implement a lambda expression (block) which computes and returns the factorial of an integer number. [CO2] 10

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

6-a. Write a JAVA application that uses string method to compare two strings input by the user and displays output whether the first string is less than equal or greater than the second.[CO3] 10

6-b. Discuss any 5 methods of String class?[CO3] 10

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

7-a. Explain the concept of Daemon thread. Can we transform the user thread into daemon thread if that is started? Explain with with the help of example.[CO4] 10

7-b. Explain the concept of Thread interrupts. Give suitable example in support.[CO4] 10

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

8-a. Explain GUI with real life example. [CO5] 10

8-b. What is a layout manager and what are different types of layout managers available in Java Swing? [CO5] 10