NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MCA

SEM:II CARRY OVER THEORY EXAMINATION-AUGUST 2023

Subject: Object Oriented Programming with 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.   Which among the following feature does not come under the concept of   1
         OOPs?   (CO1)

       (a) Data binding

       (b) Data hiding

       (c) Platform independent

       (d) Message passing

1-b.   Which of the following is a type of polymorphism in Java?   (CO1)   1

       (a) Compile time polymorphism

       (b) Design time polymorphism

       (c) Multiple polymorphism

       (d) Multilevel polymorphism

1-c.   The annotation used in Java to override the method of a super-class or   1
         interface by the subclass or implementing class is ___.   (CO2)

       (a) @FunctionalInterface
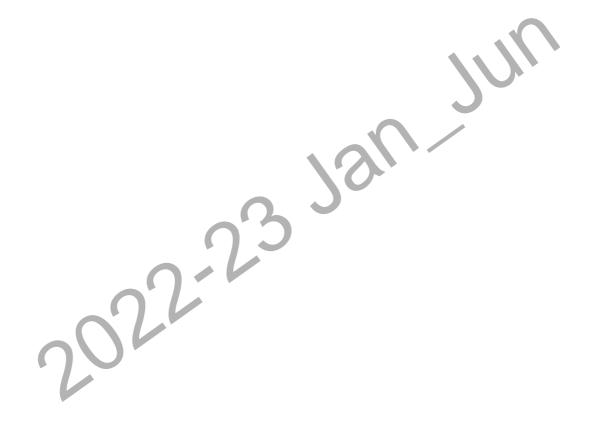
(b) @Override

(c) @super

(d) @subclass

1-d.   Which of these operators is used to allocate memory to array variable in   1
Java?   (CO2)

   (a) malloc

   (b) alloc

   (c) new

   (d) new malloc

1-e.   Which of the following statements is true about exception handling in Java: 1
(CO3)

   (a) A try block can have many catch blocks but only one finally block

   (b) A try block can have many catch blocks and many finally blocks

   (c) A try block must have one finally block for each catch block

   (d) A try block must have at least one catch block to have a finally block

1-f.   Which of these method of class String is used to obtain length of String   1
object?   (CO3)

   (a) get()

   (b) Sizeof()

   (c) lengthof()

   (d) length()

1-g.   Which of these method of Thread class is used to find out the priority given to a   1
thread?   (CO4)

   (a) get()

   (b) ThreadPriority()

   (c) getPriority()

   (d) getThreadPriority()

1-h.   Which of the following is not pre defined annotation in Java?   (CO4)   1

   (a) @Deprecated

   (b) @Overriden

   (c) @Target

   (d) @FunctionInterface

1-i.   In Java, what do you call an area on the screen that has nice borders and   1
various buttons along the top border?   (CO5)

(a) A window

(b) A screen

(c) A box

(d) A frame

1-j.   List, Set and Queue _____ Collection.   (CO5)   1

(a) extends

(b) implements

(c) both of the above

(d) none of the above

2. Attempt all parts:-

2.a.   Describe the command line argument passing mechanism.   (CO1)   2

2.b.   Explain default constructor.   (CO2)   2

2.c.   How we can create string objects in Java?   (CO3)   2

2.d.   What does run() method do?   (CO4)   2

2.e.   What are the basic interfaces of Java Collections Framework?   (CO5)   2

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SECTION B   30

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

3-a.   Distinguish between if statement & switch statement.   (CO1)   6

3-b.   Demonstrate for and for-each loop with an example.   (CO1)   6

3-c.   Define following : Garbage collector and lambda expression.   (CO2)   6

3-d.   Differentiate between a class & interface.   (CO2)   6

3-e.   Demonstrate the implementation of unchecked exceptions.   (CO3)   6

3.f.   Write steps how a java application can store and read data from a file?   6
         (CO4)

3.g.   Differentiate between Array and ArrayList.   (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 object oriented programming concepts in Java.   (CO1)   10

4-b.   Explain class diagram and object diagram in details.   (CO1)   10

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

5-a.   Describe method overloading and overriding with example in Java?   (CO2)   10

5-b.   Write a program in Java to print the largest element in an array.   (CO2)   10

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

6-a.   Define package in java and also explain import and execution of package with   10
example.   (CO3)

6-b.   Write a program in Java to handle an exception using multiple catches.   10
(CO3)

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

7-a.   Discuss and elaborate life cycle of thread?   (CO4)   10

7-b.   Explain annotation and its types, give also example.   (CO4)   10

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

8-a.   Describe different Layout Managers in java.   (CO5)   10

8-b.   Explain HashSet and HashMap in java with suitable examples.   (CO5)   10