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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

M.Tech (Integrated)

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 LinkedHashSet is _____. [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
<u>SECTION-B</u>		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
<u>SECTION-C</u>		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