

--	--	--	--	--	--	--	--	--	--	--



GIET UNIVERSITY, GUNUPUR - 765022
M.C.A (Second Semester) Regular Examinations, May - 2024
MCA23202 - Object Oriented Programming using JAVA

Time: 3hrs

Maximum: 60 Marks

(The figures in the right hand margin indicate marks)

PART – A**(2 x 5 = 10 Marks)**Q.1. Answer *ALL* questions

	CO #	Blooms Level
a. Differentiate between a static and non-static data member in java.	CO2	K3
b. What do you mean by wrapper class in java? What is Autoboxing and Unboxing.	CO2	K1
c. What is the output of the following code? <pre>public class test{ public static void main(String[] arr){ Integer num1 = 400; Integer num2 = 400; if(num1 == num2){ System.out.println(0); } else{ System.out.println(1); } } }</pre>	CO1	K1
d. Enlist the importance of finally keyword in exception handling.	CO3	K2
e. What do you mean by object? Explain various ways of creating object in java.	CO1	K1

PART – B**(10 x5=50 Marks)**Answer *ALL* questions

	Marks	CO #	Blooms Level
2. a. What do you mean by array. Describe different ways of declaring an array in java with suitable example.	5	CO1	K2
b. Write a Java program to find if the given number is palindrome or not	5	CO1	K2
(OR)			
c. Write down the differences between Procedure oriented and Object oriented programming.	5	CO1	K2
d. Write a program to print first 5 values which are divisible by 2, 3, and 5.	5	CO1	K2
3.a. Write a program that takes as input the size of the array and the elements in the array. The program then asks the user to enter a particular index and prints the element at that index. This program may generate <code>ArrayIndexOutOfBoundsException</code> . Use exception handling mechanisms to handle this exception. In the catch block, print the class name of the exception thrown.	5	CO2	K2
b. Write down the differences between method overloading and method overriding.	5	CO2	K2

(OR)

- c. Create a class Author with the following information. 5 CO2 K2
Member variables: name (String), email (String), and gender (char)
Parameterized Constructor: To initialize the variables
Create a class Book with the following information.
Member variables: name (String), author (of the class Author you have just created), price (double), and qtyInStock (int)
Parameterized Constructor: To initialize the variables
Getters and Setters for all the member variables
In the main method, create a book object and print all details of the book (including the author details)
- d. Explain the following methods used in the StringBuffer class with examples. 5 CO2 K2
(i) append () (ii) insert () (iii). replace () (iv). delete()
- 4.a. What do you mean by package? Explain various steps to create and use a package in java. 5 CO3 K2
- b. Explain all the keywords used in the exception handling mechanism. Write a java program to demonstrate how arithmetic exception can be handled. 5 CO3 K2

(OR)

- c. What do you mean by thread? Explain thread life cycle methods with suitable example. 5 CO3 K2
- d. . Write a java program that will concatenate 2 strings (without using library functions) and return the result. The result should be in lowercase. 5 CO3 K2
- 5.a. Write an interface called Playable, with a method void play (); 5 CO4 K2
Let this interface be placed in a package called music.
Write a class called Veena which implements Playable interface. Let this class be placed in a package music.string
Write a class called Saxophone which implements Playable interface. Let this class be placed in a package music.wind
Write another class Test in a package called live. Then,
a. Create an instance of Veena and call play () method
b. Create an instance of Saxophone and call play () method
c. Place the above instances in a variable of type Playable and then call play()
- b. What is multithreading? Explain the steps for creating thread in Java. Also explain the predefined thread priorities in Java. 5 CO4 K2

(OR)

- c. Explain Reader and Writer classes. Write a program to copy the contents of one file into another. 5 CO4 K2
- d. Write a program to create two threads, one thread will print odd numbers and second thread will print even numbers from 1 to 20 ? 5 CO4 K2
- 6.a. What do you mean by applet? Describe applet lifecycle methods. 5 CO5 K2
- b. Write a Java program to count total number of words and characters entered in the textarea. 5 CO5 K2

(OR)

- c. Explain with an example how to create and run an applet. 5 CO5 K2
- d. Write a program to draw a smiley using the applet. 5 CO5 K2

--- End of Paper ---