GIET UNIVERSITY, GUNUPUR – 765022

M. C. A (Second Semester) Regular Examinations, August - 2023

MCA20202 - Object Oriented Programming using Java

Time: 3 hrs   Maximum: 70 Marks

(The figures in the right hand margin indicate marks.)

PART – A   **(2 x 10 = 20 Marks)**

Q.1. Answer *ALL* questions

		CO #	Blooms Level
a.	Explain **public static void main(String args[])** in Java.	CO1	K2
b.	What is the output of the following code ?	CO1	K1

```
public class A {
    public static void main(String[] args)
    {
        if (true)
            break;
    }
}
```

c. What is the output of this program?   CO3   K2

```
class hello
{
    public static void main(String args[])
    {
        try
        {
            int a, b;
            b = 0;
            a = 5 / b;
            System.out.print("A");
        }
        catch(ArithmeticException e)
        {
            System.out.print("B");
        }
        finally
        {
            System.out.print("C");
        }
    }
}
```

}

d.	Difference between this and super keyword in java?	CO2	K4
e.	List out differences between "abstract class" and "interface".	CO2	K4
f.	Define Copy Constructor in Java.	CO3	K4
g.	Define Wrapper Classes in Java.	CO4	K4
h.	Define package in Java.	CO4	K4
i.	Differentiate between instance and local variables.	CO1	K4
j.	What are the differences between constructor and method of a class in Java?	CO3	K4

PART – B   (10 x 5 = 50 Marks)

Answer *ANY FIVE* questions

		Marks	CO #	Blooms Level
2. a.	Explain with a neat diagram the architecture of JVM.	5	CO1	K2
b.	Write a program to print second smallest element in an array of 10 elements.	5	CO1	K2
3. a.	What are the basic components of OOPS? List out all the features of Java.	5	CO1	K1
b.	Explain the concept of "**Jagged Array**" with a suitable example.	5	CO1	K2
4. a.	What is an exception? Discuss the usage of try-catch block with a proper example.	5	CO2	K2
b.	Explain all the usages of **super** keyword in the inheritance with an example.	5	CO2	K2
5. a.	Differentiate between **throw** and **throws** keywords with a suitable example on each.	5	CO3	K4
b.	Explain **dynamic method dispatch** with a suitable example.	5	CO3	K2
6. a.	What is synchronization? Explain the role synchronized method with a suitable example.	5	CO3	K2
b.	Write a Java program to illustrate method overloading to calculate area of square, rectangle and circle.	5	CO3	K2
7. a.	Differentiate among sleep (), join (), and yield () methods with examples of each.	5	CO4	K4
b.	Illustrate nested try block. Explain with suitable example by using exception classes ArithmeticException and ArrayIndexOutOfBoundsException.	5	CO4	K2
8. a.	Differentiate between String and StringBuffer class. Write a program to test whether a string is palindrome or not.	5	CO4	K4
b.	Explain the life cycle of a thread. Write a program to illustrate the usage of **join()** method.	5	CO4	K2

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