

GURU NANAK INSTITUTE OF TECHNOLOGY
An Autonomous Institute under MAKAUT
2022
OBJECT ORIENTED PROGRAMMING WITH JAVA
MCA20-203

TIME ALLOTTED: 3 Hrs

FULL MARKS: 70

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable***GROUP – A****(Multiple Choice Type Questions)**Answer any **ten** from the following, choosing the correct alternative of each question: **10×1=10**

		Marks	CO No
1.	(i) What is the full form of JVM? a) Java Visual Machine b) Java Variable Management c) Java Virtual Machine d) None of these	1	CO1
	(ii) Which operator is used to create memory to object? a) New b) Dot c) both (a) and (b) d) none of these	1	CO1
	(iii) Which of these keywords are used for the block to be examined for exceptions? a) Check b) Throw c) Catch d) try	1	CO2
	(iv) abstract method is the only entry point to the thread. a) suspend() b) run() c) resume() d) wait()	1	CO2
	(v) Which is the container that doesn't contain title bar and Menu Bars but it can have other components like button, text field etc? a) Window b) Frame c) Panel d) Container	1	CO5
	(vi) Which is a component in AWT that can contain another component like buttons, text fields, labels etc.? a) Window b) Container c) Panel d) Frame	1	CO5

- (vii) Which of these method of **Thread** class is used to find out the priority given to a thread? 1 CO2
- ThreadPriority()
 - getPriority()
 - getThreadPriority()
 - get()
- (viii) Which of the following is used for implementing inheritance through an interface? 1 CO1
- inherited
 - Compilation Error
 - extends
 - implements
- (ix) What will be the output of the following Java program? 1 CO1
- ```
class bitwise_operator
{
 public static void main(String args[])
 {
 int a = 3;
 int b = 6;
 int c = a | b;
 int d = a & b;
 System.out.println(c + " " + d);
 }
}
```
- 7 2
  - 7 5
  - 7 7
  - 5 2
- (x) What will be the output of the following Java program? 1 CO1
- ```
class rightshift_operator
{
    public static void main(String args[])
    {
        int x;
        x = 10;
        x = x >> 1;
        System.out.println(x);
    }
}
```
- 10
 - 5
 - 2
 - 20
- (xi) What is the difference between a Java applet and a Java application? 1 CO5
- An application can in general be trusted whereas an applet can't
 - An applet must be executed in a browser environment
 - An applet is not able to access the files of the computer it runs on
 - (a), (b) and (c)

- (xii) Which of these packages contain all the Java's built in exceptions? 1 CO2
- java.io
 - java.util
 - java.lang
 - None of these

GROUP – B**(Short Answer Type Questions)**Answer any *three* from the following: $3 \times 5 = 15$

		Marks	CO No
2.	(a) Write a suitable program to demonstrate implementation of thread priority.	5	CO2
3.	(a) What is bytecode?	1	CO1
	(b) Difference between Byte Code and Machine Code.	4	CO1
4.	(a) What is data abstraction?	2	CO1
	(b) Differentiate between interface and abstract class.	3	CO1
5.	(a) What is an exception?	2	CO2
	(b) Differentiate between error and exception.	3	CO2
6.	Explain the role of the start(), run() and stop() methods in thread.	5	CO2

GROUP – C**(Long Answer Type Questions)**Answer any *three* from the following: $3 \times 15 = 45$

		Marks	CO No
7.	(a) What is Constructor?	3	CO1
	(b) Write a java program to illustrate "Constructor Overloading".	5	CO1
	(c) Write a program in Java to accept a name containing three words and display the name in short form with initials. Sample Input: MAHINDER SINGH DHONI Sample Output: M.S.DHONI	7	CO3
8.	(a) Write a program to illustrate the use of multiple catch blocks for a try block	5	CO2
	(b) What are the uses of 'throw' and 'throws' clauses for exception handling?	5	CO2
	(c) Explain the class hierarchy of exceptions.	5	CO2
9.	(a) What is inheritance?	2	CO1
	(b) Explain different forms of inheritance with suitable program segments and real world example classes.	5	CO1
	(c) Write a program in Java to store the numbers in 4x4 matrix in Double Dimensional Array. Display the sum of (i) left diagonal elements. (ii) right diagonal elements.	8	CO4
10.	(a) Explain the life cycle of an Applet.	5	CO5
	(b) How applets are added to HTML? Discuss with the help of an suitable example.	5	CO5
	(c) Explain the two ways of creating a thread in Java using program	5	CO2
11.	Write short notes on any three of the followings	3x5=15	
	(a) Layout Manager	5	CO5
	(b) AWT	5	CO5
	(c) Garbage Collection.	5	CO1
	(d) Life cycle of Thread	5	CO2