

GURU NANAK INSTITUTE OF TECHNOLOGY
An Autonomous Institute under MAKAUT

2021

OBJECT ORIENTED PROGRAMMING USING JAVA
IT402

TIME ALLOTTED: 3 HOURS

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 initial state of a thread when it is created and started? a) Wait b) Running c) Ready d) Sleep	1	CO4
	(ii) Which of this statement is incorrect? a) All object of a class are allotted memory for the all the variables defined in the class b) If a function is defined public it can be accessed by object of other class by inheritance c) main() method must be made public d) All object of a class are allotted memory for the methods defined in the class	1	CO1
	(iii) What would be the behaviour if this() and super() used in a method? a) Runtime error b) Throws exception c) compile time error d) Runs successfully	1	CO2
	(iv) What is the return type of Constructors? a) int b) float c) void d) none of the mentioned	1	CO1
	(v) Which of these is correct way of calling a constructor having no parameters, of superclass A by subclass B? a) super(void); b) superclass.(); c) super.A(); d) super();	1	CO1

(vi)	What would be behaviour if the constructor has a return type? a) Compilation error b) Runtime error c) Compilation and runs successfully d) Only String return type is allowed	1	CO1
(vii)	Which of the below is invalid identifier with the main method? a) Public b) Static c) Private d) final	1	CO1
(viii)	What is the process of defining more than one method in a class differentiated by method signature? a) Function overriding b) Function overloading c) Function doubling d) None of the mentioned	1	CO3
(ix)	Which of these classes are used by character streams for input and output operations? a) InputStream b) Writer c) ReadStream d) InputOutputStream	1	CO4
(x)	What is multithreaded programming? a) It's a process in which two different processes run simultaneously b) It's a process in which two or more parts of same process run simultaneously c) It's a process in which many different process are able to access same information d) It's a process in which a single process can access information from many sources	1	CO4
(xi)	Which of these methods is a part of Abstract Window Toolkit (AWT) ? a) display() b) paint() c) drawString() d) transient()	1	CO4
(xii)	Thread priority in Java is? a) Integer b) Float c) Double d) long	1	CO4

GROUP – B

(Short Answer Type Questions)

Answer any **three** from the following: 3×5=15

		Marks	CO No
2.	Write a Java program that to calculate volume of sphere using inheritance	5	CO4

3.	Explain the use of ' this ' keyword and the ' super ' keyword in Java programming.	5	CO3
4.	Illustrate with example object and array of object	5	CO3
5.	(a) Write a program to reverse a String using String class.	3	CO3
	(b) How does String class differ from String buffer?	2	CO3
6.	(a) What is byte code?	1	CO1
	(b) Explain "public static void main (String [] args)" in java.	2	CO1
	(c) Why Java is called platform independent language?	2	CO1

GROUP – C

(Long Answer Type Questions)

Answer any **three** from the following: 3×15=45

		Marks	CO No
7.	(a) What is an exception? Explain the principle of exception handling with programming example.	6	CO3
	(b) Explain the difference between Error and Exception.	4	CO2
	(c) Define User defined exception with example.	5	CO2
8.	(a) Explain Method Overriding with a suitable example.	6	CO3
	(b) Define Inheritance and also write down the types of Inheritance.	5	CO1
	(c) Explain the use of different access specifier used in java	4	CO3
9.	(a) Write a program to demonstrate the "ArrayIndexOutOfBoundsException".	4	CO3
	(b) Explain how isAlive() and join() methods are used for Multithreading Program.	6	CO4
	(c) Why we need Interface? Explain with a suitable example.	5	CO4
10.	(a) Write a java program that take 5 student's Name, Roll, Stream and Name of College using interface and print it.	5	CO3
	(b) Write a java program to demonstrate Multithreading concept.	5	CO4
	(c) Can constructor be overloaded? Explain with proper example.	5	CO1
11.	Short notes(Any three)	3X5=15	
	(a) Polymorphism	5	CO1
	(b) Inner class	5	CO2
	(c) Inheritance	5	CO1
	(d) Wrapper class	5	CO1
	(e) JVM	5	CO2