Total Number of Pages: 02   B.Tech / 22IT4PC02T

4th Semester Regular Examination: 2023-24
OBJECT ORIENTED PROGRAMMING USING JAVA
BRANCH: IT
Time: 3 Hours
Max Marks: 100
Q Code: Q078

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q No.		CO	Level		
Q1				**Short Answer Type Questions (Answer All-10)**	**(02x10)**
	a)	1	2	JVM is platform dependent. Justify.	2
	b)	1	2	Why there is no destructor in java?	2
	c)	1	2	How abstraction is achieved in Java programming?	2
	d)	1	2	Differences between constructor and destructor with examples.	2
	e)	2	1	What is Bytecode in Java. Mention its two advantages.	2
	f)	2	1	What is wrapper class? Explain the use of any one wrapper class?	2
	g)	3	1	What is multithreading and how it is different to multi-tasking?	2
	h)	3	2	How multiple inheritance is supported in java?	2
	i)	4	1	What is Layout managers and explain the use of Layout managers.	2
	j)	4	2	Differences between Tabbed panes, Scroll panes.	2

Part-II

Q No.		CO	Level		
Q2				**Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)**	**(06x08)**
	a)	1	1	Explain constructor overloading with a suitable example.	6
	b)	1	1	What is a wrapper class? Give an example of wrapper class.	6
	c)	2	2	Demonstrate how inheritance takes place through constructors.	6
	d)	2	2	Explain the use of isAlive () function with an example.	6
	e)	2	2	What are packages? Name some standard packages available in Java	6
	f)	3	2	Discuss the usage of final and this keywords using suitable example.	6
	g)	3	2	What are the difference between String and String Buffer class?	6
	h)	3	3	Write a Java code to create multiple threads.	6

i)	4	3	What do you understand by Collection framework in java? List methods available in iterator interface.	6
j)	4	3	Why interfaces are used in java? Using suitable example explain how they are used in Java.	6
k)	4	2	Explain the event delegation model of Java.	6
l)	4	2	What is package? How are they created and used? Discuss.	6

Part-III

Q No.		CO	Level		
				Long Answer Type Questions (Answer Any Two out of Four)	(02x16)
Q3	a)	1	1	What is method overriding? Demonstrate its use through an example.	8
	b)	1	3	Design a class EMPLOYEE with the following data members: empno, empname, basicPay and required member functions. Write a JAVA program to read the data of N employee (like empno, empname, basicPay) and compute netSalary of each employee. netSalary= grossSal - tax. grossSal=basicPay+DA+TA+HRA DA=52% of basic, TA=30% of basic, HRA=25% of basic tax =20% of grossSal	8
Q4	a)	2	3	Create a class Mammal with a method show(). Inherit the Mammal class to Man, Dog, and Elephant. Inherited classes must have a String data member called "Name" and two constructors (default & parameterized). Write a JAVA program to show method overriding for the given scenario.	8
	b)	2	2	Write a program in Java to read 'n' integer numbers into an array. Find the sum and average and print.	8
Q5	a)	3	3	Create a class Student with attributes roll no, name, age and course. Initialize values through parameterized constructor. Discuss how exception handling is dealt in Java.	8
	b)	3	3	Discuss the several phases of Thread life cycle in Java?	8
Q6	a)	4	3	Create a package named MYmath. Define class Maths with static methods to find the square (int SQRT(int)) and power (long POW(int, int)) of a given numbers. Create sub-package called MYCheck under MYmath and define a class AreaCalc with static methods areaSquare(int a), and areaRect(int a, int b) under it. Define a class Main with required methods to show the use of all these methods from MYmath package and MYcheck sub package.	8
	b)	4	3	What methods do you use to register a handler for a mouse pressed, released, clicked, entered, exited, movedand dragged event? Explain with an example.	8