



# R V College of Engineering Department of Computer Science and Engineering CIE 1: Question Paper

Subject: (Code)

Date:

Name:

4 a

46

5 a

5 b

example

is in using if-else-if ladder.

Explain class and class members in Java

Box\_demo should have a main () method.

BASICS TO JAVA PROGRAMMING (22PL15C)

Semester: 1st BE

6

4

3

2

2

Duration: 90 minutes

USN:

Section: A/B/C

Staff: SDV/AUC/MS

Q. No	Answer all questions	24.1		Total
la	List the primitive data types used in the Java programming language	Marks	Level	CO
	and explain each data type indicating the range and syntax for declaration.	6	1	1
1b	Write a Java Program to find the area of Circle.	4	3	2
2a	Write a Java program to calculate the distance travelled by light in 1000 days. Assume speed of light = 186000.	7	3	2
2b	Define object. Write a syntax for declaring an object.	3	2	2
3.a	Explain the object-oriented concepts in detail.	6	1	1
3.b	Write a Java Program to find an average of an array nums [] = {10.1,11.2,12.3,13.4,14.5}	4	2	2

Write a Java program to check which season a given particular month

List the differences between while () and do-while () loop using an

Write a Java program to find a volume of two boxes mybox1 and

mybox2 using two classes called Box and Box\_demo. Class Box should include a variable and a method for calculating a volume and

Marks	Parti	culars	CO1	CO2	CO3	CO4	Ll	L2	L3	L4	L5	L6
Distribution	Test	Max Marks	17	33			14	12	24			



## R V College of Engineering Department of Computer Science and Engineering

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CIE 1: Question Paper
BASICS TO JAVA PROGRAMMING Ser (22PL15C)

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Staff: SDV/AUC/MS Duration: 90 minutes Date: A/B/C Section: USN: Name:

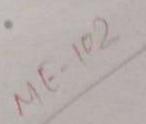
Q. No	Answer all questions	Marks	Level	CO
la	Write Java Program to demonstrate Constructor Overloading by creating class Box with properties of Width, Height, Depth and methods to compute and display the volume.	7	2	2
1b	Explain the access modifiers used in Java.	3	1	1
2a	Define Recursion. Illustrate the Recursion with Java code to find the factorial of the given number.	6	2	2
, 2b	List and explain the different types of Inheritance used in Java.	4	1	2
3.a	Define Package in Java. Write an example code for creating a Java Package and import Java package.	7	1	2
3.b	Explain the importance of Super keyword in Inheritance with an example.	3	2	2
4	Write a Java Program to  a) Create a Super class called Bicycle with three methods apply brake (), Speedup () and tostring ().  b) Create a sub class called Mountain Bike () and inherit the methods from the base class.	10	3	3
	Illustrate the Method overriding on tostring() method.  Create an Animal class, with attributes name and age. Create classes	10	3	3
5	Dog2, Cat2, Fish2 and Bird2 to inherit from the Animal class. Create PetOwner2 class to test the inheritance and polymorphism.			

	Partie	culars	COI	CO2	CO3	CO4	Ll	L2	L3	L4	L5	L6
Marks Distribution	Test	Max Marks	3	27	20		14	16	20			

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Course	Outcomes: After completing the course, the students will be able to:-
CO 1	Explore the fundamentals of Object-oriented concepts and apply features of object-oriented programming of Java to solve real world problems.
CO 2	to to and astablish relationship among Classes for various applications from problem
	The second secon
CO 3	definition.

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## Go, change the world

Academic year 2023-2024 (Odd Sem)

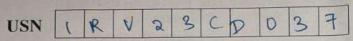
## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

## **Basics To Java Programming**

Date	JAN 2024	T.	
ourse Code	22PL15C	Maximum Marks	50
Sem	ZZFLISC	Duration	-
		IMPROVEMENT TEST 90 Min	
		Staff:SDV/MS/AUC	

L No.	Test Questions	M	BT	CO
1.	(a) With an example code snippet, explain Exception Handling and five keywords that are used to manage Exception handling in Java programming Language.  (b) With an example code snippet, explain packages, types of packages and its advantages in laws programming Languages.	05	2	1
-	advantages in Java programming Language.	05	2	2
2.	(a)(i) With an example code snippet, explain Interface in Java programming Language.  (ii) Write a Java program to create an interface Shape with the getArea() method. Create three classes Rectangle, Circle, and Triangle that implement the Shape interface. Implement the getArea() method for each of the three classes.	05	2	3
	(by Write a Java program to create a class known as "BankAccount" with methods called deposit () and withdraw (). Create a subclass called SavingsAccount that overrides the withdraw () method to prevent withdrawals if the account balance falls below one hundred.	05	3	4
3.	(a) With a neat diagram, explain the states in thread life cycle in Java programming Language.	05	2	1
	(b) Write a Java program to create and start multiple threads that display different message.	05	2	3
4.	(a) With an example code snippet, Define the two ways to implement thread in Java programming Language. (b) With sample code snippet, Explain thread priority in Java programming Language?	05	2	2
	(a)List various Thread Methods in Java programming Language.	0.5	1	1
5.	(b) Write a Java program to create a class called Vehicle with a method called drive(). Create a subclass called Car that overrides the drive() method to print "Repairing a car".	05	1 3	1

CO1	Explore the fundamentals of Object-oriented concepts and apply features of object-oriented programming of Java to solve real world problems.
CO2	Design Classes and establish relationship and Ct
C 100	Design Classes and establish relationship among Classes for various applications from problem definition.  Analyze and implement reliable object-oriented applications using Java features such as Exception Handling.  Design and development, Collection framework and Strings.
CO4	Design and develop real world applications using Object Oct.
	Design and develop real world applications using Object Oriented concepts and Java programming



### RV COLLEGE OF ENGINEERING®

(An Autonomous Institution affiliated to VTU)

I/II Semester B. E. Regular / Supplementary Examinations Feb-2024 Common to all programs

#### **BASICS OF JAVA PROGRAMMING (ELECTIVE)**

Time: 03 Hours Instructions to candidates: Maximum Marks: 100

- 1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
- 2. Answer SIX full questions from Part B. In Part B question numbers 2 and 11 are compulsory. Answer any one full question from 3 and 4, 5 and 6, 7 and 8 & 9 and 10.

#### PART-A

1	1.1	The process of defining a method in a subclass having same name and type signature as a method in its superclass is called as	0.1
	1.2	Mention the output of the following Java code:	01
		class int	
		public static void main(String args [])	
		int a = 4;	
		System. out. $print(++a*8)$ ;	
			01
	1.3	Write two uses of 'this' keyword.	02
	1.4	is a superclass of every class in Java.	01
	1.5	List two ways of creating threads in Java.	02
	1.6	keyword is used for the block to be examined of exceptions.	01
	1.7	Which method of class string is used to obtain a length of string object?	01
1	1.8	is a mechanism for naming a visibility control of a class and its content.	01

#### PART-B

2	a b	Explain Encapsulation and abstraction in Java. How $1-D$ and $2-D$ arrays are declared and initialized in Java? Explain with suitable examples.	06
3	a b	Explain class with an example program to declare and create an object of the class declared which contain few data members and member functions.  What is method overloading? Explain with a program to demonstrate it.	07
		OR	

1			
4	a	Explain the following in Java:	
		i) Constructor	07
	b	ii) Finalize method.  Demonstrate the use of break and continue statement in Java.	07
-	D	Demonstrate the use of break and contained statement as	
5	a	Explain abstract class and abstract method in Java.	06
	b	What are the uses of final keyword in Java? Demonstrate each use	
13		with an example program.	08
-	1		-,
		OR	
6		Explain all the uses of super keyword in Java with example program.	00
	a		06
1	b	With an example program demonstrate the use of inheritance and how the constructors are called in inheritance.	08
1		now the constructors are cancer in inneritance.	00
7	a	Define package. Explain how to create and import packages in java	
	a	with an example.	07
	ь	With the help of Java code snippet explain interfaces in Java.	07
		OR	
8	a	Develop Java program and explain how to handle multiple catch	
		blocks for a nested try block.	07
	b	How packages are different from interfaces? Explain with an	
0 5		example.	07
9	0	What is multithuading? In how were	
9	a	What is multithreading? In how many ways Java Implements	07
	b	multithreading? Explain one of these ways with suitable example.  Explain with example, suspending and resuming threads in java.	07
		Explain with example, suspending and resulting threads in Java.	07
			1
		OR	
10			
10	a	Explain the concept of thread priorities with the help of Java code	
	L	snippet.	07
201-	b	With a neat sketch, Explain the life cycle of a thread in Java.	07
11		LAB COMPONENT	RE
11	a	Develop a Java program top create a string object and to show the	
		working of following methods by writing syntax, explanation and	
		example.	
		i) chatAt()	
		ii) concat()	
	1	iii) equals()	
	Party of	iv) indexOf()	
		v) replace()	10
	h		11
	b	Develop a Java program to create a class for complex number which	
	b	Develop a Java program to create a class for complex number which contain default constructor, constructor with arguments, mathede to	
	b	Develop a Java program to create a class for complex number which	