

(Please write your Enrollment Number)

Enrollment No. _____

END TERM EXAMINATION
(CBCS)(SUBJECTIVE TYPE)
Course Name: MCA (IT) , Semester:2nd
(MAY, 2024)

Subject Code: MCA 102	Subject: Object Oriented Programming using Java
Time :3 Hours	Maximum Marks :60
Note:Q. 1 is compulsory. Attempt one question each from the Units I, II, III & IV.	

Q1		(5*4 =20)	
1	Explain why java is platform independent and create a program to generate factorials of a number.		
2	Use a program to explain i) try with multiple catch ii) interface		
3	Explain: i) benefits of inheritance in java ii) Use of final		
4	What is i)Event handling model ii) Multithreading in java		
UNIT-I			
Q2	Explain the features of Java and JVM architecture. Write a program that takes two numbers using java.io and prints them out. Then use a for loop to print the next 17 numbers in the sequence where each number is the sum of the previous two.	(10)	
Q3	What is Class and Objects? Explain Array of objects. Design a class Person which will have following information:Aadhaar Number(type:int), Person Name(type:String), Age (type:int) and Birth Date. Provide appropriate constructor(s) & methods to this class. Create a main function and 3 objects of Person using an array of objects.	(10)	
UNIT-II			
Q4	What are predefined and user defined packages in java, how to use them and explain benefits of using packages?Use a program to explain the visibility of members of a class in the sub class , non subclass in the same and different package.	(10)	
Q5	Explain the compile time and run time polymorphism and use of super. Write a Java program to create a class known as "BankAccount" with methods called deposit() and withdraw(). Create subclass called SavingsAccount and CurrentAccount class that overrides the withdraw() method to prevent withdrawals if the account balance falls below five hundred for saving account.Create objects and show the use of dynamic method dispatch.	(10)	
UNIT-III			
Q6	What is the I/O stream?Explain the use of BufferedReader in java and create a program to read the content of a file (number.txt) and check if the number is even or odd and display all the even numbers on console.	(10)	
Q7	What is the exception handling mechanism in java?Use a program to explain any three checked and unchecked exceptions and also show use of user defined exceptions.	(10)	
UNIT-IV			
Q8	Differentiate between Multitasking and MultiThreading? How to create a thread in java?Also show the use of sleep , join and isAlive methods using the program.	(10)	
Q9	Differentiate between different containers in AWT?What is the default layout of panel and frame? Using AWT,create Bank Account Form(Bankform.java) which has labels, text fields, radio button,checkbox and perform event handling on at least two components	(10)	