Reg. No. ☐☐☐☐☐☐☐☐☐☐☐☐☐

B.E./ B.TECH. DEGREE EXAMINATIONS, MAY 2023
Second Semester
AD22202 – OBJECT ORIENTED PARADIGM AND PROGRAMMING
(Artificial Intelligence and Data Science)
(Regulation 2022)

TIME:3 HOURS   **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Apply the concepts of object oriented programming for practical problem solutions.	2
CO 2	Apply generic data type for the data type independent programming which relates to reusability.	3
CO 3	Design the exception handling techniques for resolving run-time errors and handle large data set using file I/O.	3
CO 4	Develop Java programs using object oriented concepts.	3
CO 5	Design and develop real world problems in Java.	3

PART- A(20x2=40Marks)
(Answer all Questions)

		CO	RBT LEVEL
1.	What do you mean by dynamic binding? How it is useful in OOP?	1	4
2.	How is the working of member function different from friend function?	1	4
3.	List some benefits of OOPS.	1	3
4.	State the difference between constant members and static members in C++.	1	4
5.	Compare virtual function with pure virtual function.	2	4
6.	Differentiate between base class and virtual base class.	2	4
7.	List some use of RTTI.	2	3
8.	Discuss about the types of type conversions.	2	2
9.	Explain with example how can a class template be created.	3	4
10.	Write a C++ program for exception specification.	3	5
11.	Discuss the Generic functions and Generic class.	3	2
12.	What do you mean by Uncaught Exception?	3	4
13.	Distinguish between overloading and overriding.	4	4
14.	Show the use of default constructor.	4	3
15.	How the protected members in a super class can be accessed in Java?	4	4
16.	Point out the conditions to be satisfied while declaring abstract classes.	4	4
17.	Interpret what is an Exception. What is its use?	5	2
18.	Show what is the purpose of the finally clause of a try-catch finally statement?	5	3
19.	Give the different states in thread.	5	2
20.	How will you find out the length of a string in java? Give an example.	5	4

PART- B (5x 10=50Marks)

		Marks	CO	RBT LEVEL
21.(a)	Illustrate in detail about the various types of constructors in C++ with a suitable example.	10	1	3
	(OR)			
(b)	Apply and explain the concept of friend function in C++ program.	10	1	3
22.(a)	Explain the binary operator overloading through member function and friend function with an example program.	10	2	2
	(OR)			
(b)	Describe the runtime polymorphism in C++ with suitable examples.	10	2	2
23.(a)	Discuss about the class template and function template with an example in C++.	10	3	2
	(OR)			
(b)	Describe in detail about the Exception handling mechanism with a suitable C++ program.	10	3	2
24.(a)	Illustrate what is super and subclass in Java. With an example, illustrate how the members from super class are inherited by the sub class?	10	4	3
	(OR)			
(b)	Examine how the multiple inheritance implemented in Java?	10	4	3
25.(a)	How to create different types of exceptions in java? Explain it with an example.	10	5	4
	(OR)			
(b)	Analyze the multithread programming in java with an example.	10	5	4

PART- C(1x 10=10Marks)
(Q.No.26 is compulsory)

		Marks	CO	RBT LEVEL
26.	Write a java program to perform the following operations. a. Find the string index. b. Compare two strings. c. Retrieve the single character from string. d. Find the substring of the given string.	10	5	5