

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)
(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY,
THIRUVANANTHAPURAM)
THIRD SEMESTER B.TECH DEGREE EXAMINATION (R,S), DECEMBER 2023

COMPUTER SCIENCE AND ENGINEERING

(2020 SCHEME)

Course Code : 20CST205

Course Name: Object Oriented Programming Using Java

Max. Marks : 100

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 3 marks)

1. Differentiate between print() and println() methods in Java
2. Explain the structure of Java program
3. Explain method overriding with an example
4. Contrast between abstract class and interface.
5. What is the significance of the CLASSPATH environment variable in creating/using a package?
6. What is the difference between error and an exception?
7. How do we start and stop a thread?
8. Differentiate between Enumeration and Iterator interface.
9. Explain types of drivers used in JDBC.
10. What is Swing in Java? How it differs from Applet.

PART B

(Answer one full question from each module, each question carries 14 marks)

MODULE I

11. a) List and explain the various features of Java. (7)
b) Define the following terms
(a) Bytecode (7)
(b) JVM

OR

12. a) Draw a class diagram using the UML syntax to represent the following aspects concerning a library. An issuable can either be a book or a CD. (7)
Books can be either reference books or textbooks. The details of various issuable are maintained in a register called the issuable

register. The library has many members whose details are maintained in a member register. A member can issue upto 10 text books for a month. A member can also issue two CDs for a week.

- b) Explain the two approaches to Software Design. (7)

MODULE II

13. a) Differentiate between Method overloading and Method overriding with examples. (7)
- b) Write a java program which takes 5 numbers as command line arguments from user, store them in one dimensional array and display count of negative numbers. (7)

OR

14. a) Write a program to print the area of a rectangle by creating a class named 'Area' taking the values of its length and breadth as parameters of its constructor and having a method named 'returnArea' which returns the area of the rectangle. Length and breadth of rectangle are entered through keyboard. (7)
- b) Explain the various primitive datatypes in Java. (7)

MODULE III

15. a) Write a program to count the total number of characters, words, lines, paragraphs and white spaces in a given file (7)
- b) Explain **throw**, **throws** and **finally** constructs with the help of a Java program. (7)

OR

16. a) What is Exception? Demonstrate how you can handle different types of exception separately. (7)
- b) Write a program that reads file name from user, through command line argument and displays the content of text file on console (7)

MODULE IV

17. a) Write a program to create two threads, one thread will print odd numbers and second thread will print even numbers between 1 to 20 numbers. (7)
- b) Differentiate String class and String Buffer class with explanation of its methods. (7)

OR

18. a) Compare and contrast ArrayList and LinkedList in collection framework? Explain. (7)
- b) Explain delegation event model used to handle events in java. (7)

MODULE V

19. a) Explain the different components and containers of a Swing. (7)
b) Write a Java program to insert details about n students into Student table with fields rollno and name in the database DATA. (7)

OR

20. a) What is an Layout manager? Explain different types of Layout managers (7)
b) Write a Java Swing program to print a wave form on the output screen. (7)
