

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

THIRD SEMESTER B.TECH DEGREE EXAMINATION (Regular), DECEMBER 2023**(2020 SCHEME)****Course Code: 20CST281****Course Name: Object Oriented Programming****Max. Marks: 100****Duration: 3 Hours****PART A***(Answer all questions. Each question carries 3 marks)*

1. Differentiate function-oriented approach and object-oriented approach in software design.
2. List any six features of java with explanation.
3. Write a Java program to check a given number is odd or even using conditional operator.
4. Discuss the use of break and continue statement in Java.
5. What is the calling order of constructor in multilevel inheritance? Explain with a program that illustrates the same.
6. What are packages? List any four built in packages in Java
7. What is the difference of using “==” and “equals()” justify your answer with example.
8. Compare String and StringBuffer.
9. Summarize any three features of Swing API
10. Explain any three types of events with example

PART B*(Answer one full question from each module, each question carries 14 marks)***MODULE I**

11. What are UML Diagrams? Design UML diagrams such as use case diagram, class diagram, sequence diagram, and activity diagram for an online shopping system. (14)

OR

12. a) Describe the following a) JRE, b)JDK, c)JVM (9)
b) Explain about Object Oriented Software Development model (5)

MODULE II

13. a) Write a Java program to find the sum of digits of a number. (6)
b) Write short note on any two iterative statements in Java with programming example. (8)

OR

14. a) Write a Java program that passes object as arguments. (6)
b) How to handle if the number of arguments to be passed to the method is unknown. Explain with an appropriate example program. (8)

MODULE III

15. a) Explain the usage of super keyword in inheritance with an example. (4)
b) What is abstract class in java? Explain how abstract classes are created with an example. (10)

OR

16. a) Create a user defined Exception 'InvalidAgeException'. Write a Java program to validate age that reads age from the user and raise the Exception 'InvalidAgeException' on reading a number less than 18. (6)
b) Describe any FOUR exception handling keywords in Java (8)

MODULE IV

17. Write a Java program to write 5 integers to the file "input.txt" and then read the content from "input.txt" find the sum, and average then write the results to "output.txt". (14)

OR

18. a) Write down at least FIVE String operations in Java with appropriate programming example. (10)
b) Give short note on Java ArrayList (4)

MODULE V

19. a) What is Model View Controller? (4)
b) Write a Java swing program to create a simple GUI and check whether the entered number in the text box is odd or even by clicking the check button on the window (10)

OR

20. a) Write a Java program to print N natural numbers using two threads. Hint: Create two threads, then use first thread to print odd numbers and the second thread to print even numbers. (7)
b) With a neat sketch explain the life cycle of thread in Java. (7)
