Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 40920

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2024.

Third/Fourth Semester

Computer Science and Engineering

CS 3391 – OBJECT ORIENTED PROGRAMMING

(Common to : Biomedical Engineering/Computer Science and Design/Computer Science and Engineering (Artificial Intelligence and Machine Learning)/Computer Science and Engineering (Cyber Security)/Computer and Communication Engineering/Medical Electronics/Computer Science and Business Systems/Information Technology)

(Regulations 2021)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How is encapsulation achieved in java?

2. State the type promotion rule in Java.

3. State the two general forms of using super keyword.

4. What is method overloading?

5. Define thread priority.

6. Why is autoboxing used?

7. Write any two forms of PrintStream constructors.

8. State the functionality of BufferedInputStream( ).

9. How CardLayout class is unique among the other Layout managers?

10. What is an Inner class?

PART B — (5 × 13 = 65 marks)

11. (a) Explain in detail about Java's Selection statements with example.

Or

(b) What is a class? Write the general form of a class and explain how to declare an object and add a method to class that takes parameter?

12. (a) Explain about the Dynamic Method Dispatch in Java with example.

Or

(b) Discuss in detail about the methods available in object class.

13. (a) Explain how the exception handling in java is handled.

Or

(b) Discuss in detail about java thread model.

14. (a) Write a Java program that read and write the data from console.

Or

(b) Discuss the four different ways to extract a character from string object.

15. (a) Discuss in detail about the delegation event model approach for event handling.

Or

(b) Explain in detail about the class hierarchy for panel and frame.

PART C — (1 × 15 = 15 marks)

16. (a) Explain the concept of threads in Java. Write a Java program that creates three threads. Each thread should decrement its counter variable for every 10 seconds.

Or

(b) Develop a java application for a simple calculator that performs basic arithmetic operations (addition, subtraction, multiplication and division). How do you handle the 'division by zero' scenario gracefully? Include your suggestion in the implementation.

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