



# CBCS SCHEME

18CS45

## Fourth Semester B.E. Degree Examination, Dec.2023/Jan.2024 Object Oriented Concepts

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Explain the various features of Object Oriented Concept. (08 Marks)  
b. Explain function overloading with an example. (08 Marks)  
c. Explain type conversion with an example. (04 Marks)

OR

- 2 a. List properties of friend function. Write a C++ program to add two numbers using friend function. (08 Marks)  
b. What is an inline function? Write a C++ program to find the maximum of two numbers using inline function. (08 Marks)  
c. Explain scope resolution operator with an example. (04 Marks)

### Module-2

- 3 a. List characteristics of constructor. Explain default constructor with an example. (08 Marks)  
b. Explain with examples,  
(i) Array and Objects (08 Marks)  
(ii) Destructors (04 Marks)  
c. Write short notes on namespace with example. (04 Marks)

OR

- 4 a. List and explain Java Buzzwords. (08 Marks)  
b. Describe the program to calculate the average among the elements (4, 8, 10, 12) using for each in Java. How it is different from for loop? (08 Marks)  
c. Explain switch case with an example. (04 Marks)

### Module-3

- 5 a. Explain the concept of Inheritance and its classification in Java. (08 Marks)  
b. Explain exception handling mechanism with an example. (08 Marks)  
c. Write short notes on this keyword with an example. (04 Marks)

OR

- 6 a. Explain the Java garbage collection. (08 Marks)  
b. Discuss the following terms with an example :  
(i) Super keyword (08 Marks)  
(ii) Final keyword (04 Marks)  
c. Explain the method overriding with an example. (04 Marks)

### Module-4

- 7 a. Explain the packages in Java with an example. (10 Marks)  
b. Explain the interfaces in Java using suitable code. (10 Marks)

OR

- 8 a. Explain the concept of multithreading in Java. Explain how to make class threadable? (10 Marks)
- b. With a syntax, explain is Alive ( ) and Join ( ) with suitable program. (10 Marks)

**Module-5**

- 9 a. What is an applet? Explain the life cycle of the applet. (10 Marks)
- b. Write a short notes on : (10 Marks)
- (i) Event listener interface
  - (ii) Event classes

OR

- 10 Explain the following with suitable code : (20 Marks)
- a. JButton
  - b. JLabel
  - c. JComboBox
  - d. JSlider

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