

# CBCS SCHEME

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15CS45

Fourth Semester B.E. Degree Examination, Dec.2023/Jan.2024

## Object Oriented Concepts

Time: 3 hrs.

Max. Marks : 80

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

### Module-1

- 1 a. Define Structure. With suitable example. (05 Marks)
- b. State and compare Object – Oriented program using with procedure oriented programming. (04 Marks)
- c. Define Inline function. Explain with an example program. What are the conditions where inline functions cannot be expanded? (07 Marks)

OR

- 2 a. Differentiate between class and structure. With an example, explain the syntax for defining a class and structure. (08 Marks)
- b. Define friend junction and rules to be used while using it. Explain with a C++ program to add two complex numbers. (08 Marks)

### Module-2

- 3 a. How “compile once and run anywhere” is implemented in JAVA? Discuss. (04 Marks)
- b. Write a program to calculate the average among the elements {8, 6, 2, 7} using for each in Java. How for each is different from for loop? (06 Marks)
- c. Explain type conversion, with an example. (06 Marks)

OR

- 4 a. List and explain the java buzzwords. (08 Marks)
- b. Explain the concepts of arrays in Java with examples. Also write a program that creates and initializes a four integer elements array. Find the sum and average of its values. (08 Marks)

### Module-3

- 5 a. Define inheritance. Explain multilevel hierarchy with an example program. (05 Marks)
- b. Describe the various levels of access protections available for packages and their implications. (07 Marks)
- c. Distinguish between method overloading and overriding in Java, with suitable example. (04 Marks)

OR

- 6 a. Define exception. Explain exception handling mechanism with an example. (08 Marks)
- b. Discuss the following terms with example : i) super ii) final. (08 Marks)

### Module-4

- 7 a. How synchronization can be achieved for threads in Java? Explain with syntax. (06 Marks)
- b. Explain the adaptor class with an example. (04 Marks)
- c. With the syntax-explain the use of isAlive( ) and Join( ) methods. (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.



OR

- 8 a. What are the differences between suspending and stopping the threads? (05 Marks)  
b. Discuss delegation event model with suitable examples. (06 Marks)  
c. Explain inner class with example. (05 Marks)

**Module-5**

- 9 a. Define an Applet. What are the two types of an applet? Explain architecture. (08 Marks)  
b. What is Swing? Explain important feature of swing. (04 Marks)  
c. What are advantages and disadvantages of applets? (04 Marks)

OR

- 10 a. Explain the following with an example for each : (12 Marks)  
i) Jtext field      ii) Jtable      iii) JcomboBox.  
b. Explain components and containers in the swing. (04 Marks)

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