

# CBCS SCHEME

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20MCA22

## Second Semester MCA Degree Examination, Feb./Mar. 2022 Object Oriented Programming with JAVA

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. List the characteristic features of JAVA and explain only four characteristic features of JAVA. (10 Marks)
- b. What is types casting, type conversion and automatic type promotion? Illustrate it with a suitable example. (10 Marks)

OR

- 2 a. Explain the primitive data types in JAVA. (08 Marks)
- b. Give any four methods of string class with syntax and example. (08 Marks)
- c. Write a short note on this keyword. (04 Marks)

### Module-2

- 3 a. Explain the usage of final keywords with a suitable example. (08 Marks)
- b. Explain the usage of super keyword with a suitable example. (08 Marks)
- c. Discuss briefly about inner class. (04 Marks)

OR

- 4 a. What is method overloading and method overriding? Illustrate with a suitable example. (10 Marks)
- b. Explain abstract class with an example. (06 Marks)
- c. Write a short note on static keyword. (04 Marks)

### Module-3

- 5 a. What is interface? How multiple inheritance achieved in JAVA? Write a program to calculate the area of a rectangle and triangle by implementing multiple inheritance. (10 Marks)
- b. Define package. Explain the access protection for class members with respect to package. (06 Marks)
- c. Differentiate between abstract class and interface. (04 Marks)

OR

- 6 a. Explain briefly five keywords to handle exception. Illustrate it with a suitable example. (10 Marks)
- b. What is checked and unchecked exception? Write a JAVA program to illustrate Nested try catch statement. (10 Marks)

### Module-4

- 7 a. Define a thread. Explain the two methods for creating threads. (08 Marks)
- b. With a neat diagram, explain the thread life cycle. (08 Marks)
- c. Explain autoboxing and autounboxing with example. (04 Marks)

OR

- 8 a. What is enumeration? Explain briefly values( ) and valueOf( ) method with suitable example. (10 Marks)
- b. Briefly discuss any five built-in annotation in JAVA. (10 Marks)

**Module-5**

- 9 a. Explain the concept of URL and URLConnection class. (10 Marks)
- b. List and explain the Collection interface basic operation. (10 Marks)

OR

- 10 a. Explain briefly the following concepts:  
(i) HttpURLConnection class (10 Marks)  
(ii) InetAddress class (10 Marks)
- b. Write a JAVA program to demonstrate the utilities of LinkedList class. (10 Marks)

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