# CBCS SCHEME

USN

# Second Semester MCA Degree Examination, July/August 2021 **Object Oriented Programming with Java**

Max. Marks:100 Time: 3 hrs.

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

## Module-1

- (10 Marks) a. Explain the Buzzwords of Java.
  - b. Explain the various primitive data types used in Java. Give suitable examples. (10 Marks)

- a. Define an Array. Write the array declaration syntax for multidimensional arrays. Write a (10 Marks) simple Java program to create an array of objects.
  - b. Demonstrate the concept of garbage collection through suitable examples. (10 Marks)

#### Module-2

- Explain method overloading and constructor overloading with suitable examples. (10 Marks)
  - Explain the following:
    - i) Varargs
    - ii) Final keyword.

(10 Marks)

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- What are super class constructors? How does super class members are used in Java.
  - (10 Marks) b. What is Method-Overriding? Explain how it allows Java to support run-time polymorphism (10 Marks) with an example.

#### Module-3

- What are interfaces? What are their benefits? Explain how it is implemented in java with 5 (10 Marks) suitable example.
  - b. What is Exception? Explain how exception handling mechanism can be used for debugging (10 Marks) a program.

### OR

- Define package. Explain the creation of a package using a suitable example program.
  - Develop a simple program and explain multiple catch blocks.

(10 Marks) (10 Marks)

mportant 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.

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#### Module-4

- Define synchronization? Explain how inter-thread communication can be achieved in multithreading using producer and consumer problem.

  (10 Marks)
  - Define multi-threading? Construct a java program to create multiple threads in Java by implementing runnable interface.

#### OR

- 8 a. Develop a simple program and explain how enumerations are class types. (10 Marks)
  - b. Analyze the following with syntax and example:
    - i) values() and valuesof()
    - ii) compareTo().

(10 Marks)

#### Module-5

- 9 a. What are URL classes? Explain URL connections with syntax. (10 Marks)
  - b. What HttpURL connection class. Explain the methods of its.

(10 Marks)

#### OR

- 10 a. Identify different types of methods defined by collection interface. (10 Marks)
  - b. Demonstrate a simple program, the constructors and methods in ArrayList class. (10 Marks)