

# CBCS SCHEME

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18MCA21

Second Semester MCA Degree Examination, June/July 2019

## Programming using Java

Max. Marks: 100

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

### Module-1

- 1 a. Explain the key attributes of object oriented principles. (06 Marks)
- b. What is narrowing and widening? Explain with an example. (06 Marks)
- c. Explain the use of break as a form of 'goto' with an example. (08 Marks)

OR

- 2 a. How arrays are defined and initialized in Java? Explain with an example. (08 Marks)
- b. Write a short note on : i) finalize( ) ii) this. (08 Marks)
- c. Explain enhanced for loop with an example. (04 Marks)

### Module-2

- 3 a. What is string? Explain any four string comparison methods with an example. (10 Marks)
- b. Explain the following:  
i) Searching string( ) ii) Modifying string( ) iii) toCharArray( ) (10 Marks)

OR

- 4 a. What is method overloading and method overriding? Explain with an example. (10 Marks)
- b. What is constructor? Explain constructor overloading with an example. (10 Marks)

### Module-3

- 5 a. Define interface. How to implement multiple interfaces in Java. (06 Marks)
- b. Explain the following : i) Dynamic method dispatch ii) Abstract class. (10 Marks)
- c. What do you mean by static import? (04 Marks)

OR

- 6 a. How super class constructor and members are called in Java? Explain with an example. (10 Marks)
- b. Define package. Explain the creation of package and importing package with an example. (10 Marks)

### Module-4

- 7 a. What is an exception? Explain the exception handling mechanism with suitable example. (10 Marks)
- b. Explain how to create your own exceptions. Give an example. (10 Marks)

OR

- 8 a. Define thread and multi-threading. What are the two ways of creating threads? (10 Marks)
- b. Write a Java program using synchronized threads, which demonstrate producer consumer. (10 Marks)

### Module-5

- 9 a. What is enumeration? Explain values( ) and valuesOf( ) methods with example. (08 Marks)
- b. Explain AutoBoxing in Java. (04 Marks)
- c. Define Annotation. Explain any four built-in annotations in Java. (08 Marks)

OR

- 10 a. Explain Arraylist class and LinkedList class with an example. (10 Marks)
- b. Write a short note on : i) URL connection ii) Collection interfaces. (10 Marks)

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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.

