

# CBCS SCHEME

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16/17MCA32

Third Semester MCA Degree Examination, Dec.2018/Jan.2019

## Java Programming

Time: 3 hrs.

Max. Marks: 80

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. Explain the following : i) Type casting ii) this. (06 Marks)
- c. Explain the use of break as a form of 'goto' with an example. (04 Marks)

OR

- 2 a. Explain the left shift and right shift operators. (04 Marks)
- b. What is Enhanced for loop? Write a Java program to search an element in an array using enhanced for loop. (06 Marks)
- c. Write any three methods of String class to compare strings with syntax and example. (06 Marks)

### Module-2

- 3 a. Explain about static variable, static method and static block, with suitable example. (06 Marks)
- b. Explain about method overloading and constructor overloading, with suitable program. (06 Marks)
- c. What is varargs? What are the restrictions of varargs? (04 Marks)

OR

- 4 a. How Super class constructors and members are called in Java? (06 Marks)
- b. Explain the following :  
i) Dynamic method dispatch ii) Abstract class. (10 Marks)

### Module-3

- 5 a. What are Interfaces? How to implement multiple interfaces in Java? (06 Marks)
- b. Define a Package. Explain the creation of package using any example. (06 Marks)
- c. What do you mean by Static import? (04 Marks)

OR

- 6 a. What is an Exception? Give the general structure of an exception handling mechanism. How to define multiple catch blocks? (08 Marks)
- b. Explain how to create your own exceptions. Give an example. (08 Marks)

### Module-4

- 7 a. What is Synchronization? Explain how inter thread communication can be achieved in multithreading using Producer and Consumer Program. (10 Marks)
- b. Define Thread and Multithreading. What are the 2 ways of creating threads? (06 Marks)

OR

- 8 a. What is Enumeration? Explain values ( ) and valueOf ( ) methods with example. (08 Marks)  
b. Explain the following :  
i) Type Wrappers ii) Autoboxing and Autounboxing. (08 Marks)

**Module-5**

- 9 a. What are Applets? Explain the life cycle of an Applets using an example program. (08 Marks)  
b. Write a Java Program which uses DatagramSocket to demonstrate client – server communication. (08 Marks)

OR

- 10 a. Explain the following :  
i) URLConnection ii) Collection Interfaces. (08 Marks)  
b. Explain ArrayList class and LinkedList class, with suitable example. (08 Marks)

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