# CBCS SCHEME

USN

16/17MCA3

# Third Semester MCA Degree Examination, June/July 2019 **Java Programming**

Max. Marks: 80 Time: 3 hrs.

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

# Module-1

- a. Explain the key attributes of object oriented programming? (08 Marks) (08 Marks) Explain the parameterized constructor with an example.
- What is the use of StringBuffer? Explain StringBuffer class with a suitable example.

b. Write the syntax of for loop, enhanced for loop, while loop, do-while, with suitable example. (08 Marks)

# Module-2

- a. Explain: (i) Method overloading (ii) Constructor overloading (08 Marks) Briefly explain 'Varargs' with suitable example. (08 Marks)
- a. Write short notes on :
  - (i) Abstract class

(ii) Final.

(08 Marks)

b. Define Inheritance. Write a Java program to demonstrate inheritance.

(08 Marks)

# Module-3

- Define Interface. Explain how it is implemented in Java with suitable example. (08 Marks)
  - What is an Exception? Explain exception handling mechanism with an example. (08 Marks)
- (08 Marks) a. What are packages in Java? Why is it required package java program?
  - Write the following java program to create package and import it in other program:
    - (i) Create a package called shape
      - (ii) Write a class called Triangle.java in shape package. Triangle.java should calculate the area of a triangle
    - (iii) Compile and import shape.

(08 Marks)

#### Module-4

- What is multithreading? Write a Java program to create multiple threads in Java by (08 Marks) implementing runnable interface.
  - What is Enumeration? Explain value() and valueOf() methods.

(08 Marks)

Explain synchronization in multithread programming.

- (08 Marks)
- Write short notes on (i) Auto Boxing (ii) Auto unboxing

(08 Marks)

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### Module-5

- Define Applet. Give a complete applet skeleton.
  - b. Explain about URL connection class. Give suitable example.

(08 Marks)

(08 Marks)

- 10 a. With an example explain the LinkedList collection class.
  - b. What is TCP/IP client socket? Explain the two constructs used to create client sockets.

(08 Marks)

(08 Marks)

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