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.

	CBCS Scheme	
USN		16MCA32

Third Semester M.Tech. Degree Examination, Dec.2017/Jan.2018 Java Programming

Time: 3 hrs. Max. Marks: 80

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

Module-1

- a. Briefly explain the characteristics features of java programming language. (06 Marks)
 b. What is type casting? Illustrate with an example. What is meant by automatic type promotion? Give an example. (06 Marks)
 - c. Explain the use of 'this' keyword with suitable example. (04 Marks)

OD.

- 2 a. Explain about the primitive data types available in Java. (06 Marks)
 b. Explain any four methods present in string buffer class. (06 Marks)
 c. Explain the working of enhanced for loop with example
 - c. Explain the working of enhanced for loop with example. (04 Marks)

Module-2

- 3 a. What is method overloading? Explain with example. (08 Marks)
 - What is inheritance? Explain the order of constructor execution in multilevel hierarchy of classes.

OR

- 4 a. What is method overriding? Explain with example. (08 Marks)
 - b. What is polymorphism? Explain how to achieve runtime polymorphism in java with examples.

 (08 Marks)

Module-3

- Define packages. Explain the access protection for class members with respect to packages.
 (06 Marks)
 - b. Write a java program for implementation of multiple inheritance using interfaces to calculate the area of a rectangle and triangle.
 - c. Differentiate between abstract class and interface. (04 Marks)

OR

6 a. What is exception? Write a java program to define multiple catch blocks.
b. How to create user defined exceptions in java explain with example.
c. Differentiate between throw and throws.
(06 Marks)
(06 Marks)

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Module-4

7 a. Define a thread. Explain the two methods for creating threads.

b. Write a java program to demonstrate producer consumer problem using synchronized threads.

(08 Marks)

OR

a. What is enumeration? Explain values() and values of() methods
 b. What is autoboxing and auto unboxing in arithmetic expressions? Explain with example.
 (08 Marks)

Module-5

a. What is applet? Write a java applet program which handles keyboard events.
b. Explain about the two types of TCP sockets used for networking in java.
(08 Marks)

OR

a. What are collections? Write a program to demonstrate the linked list class.
 b. Write, a java program which uses datagram socket to demonstrate client server communication.
 (08 Marks)