

MCA
(SEM III) THEORY EXAMINATION 2018-19
INTERNET & JAVA PROGRAMMING

*Time: 3 Hours**Total Marks: 100***Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. Who is called 'Father of Java'? What is full form of JDK?
 - b. What is difference between 'equals ()' and '=='?
 - c. What is JDBC? Which package in java contains API for JDBC?
 - d. Differentiate 'Class Variable' and 'Instance Variable'.
 - e. Which methods used to change case of String?
 - f. Differentiate usage of 'Runnable' and 'Thread' for Multithreading.
 - g. What are web addresses? Explain the general syntax of web address.
 - h. How are they sent Email? Explain the composition of any E-mail address.
 - i. Write a program in Java to create first 100 Fibonacci numbers.
 - j. Define the following with example.
 - I. Encapsulation
 - II. Inheritance

SECTION B

- 2. Attempt any three of the following: 10 x 3 = 30**
- a. What is the difference between process based and thread-based Multitasking? Give the two ways by which a thread can be created using Java. Write a short program to demonstrate the creation of a new thread by extending the thread class.
 - b. What is the main difference between an application and applet? What are the advantages of Java swings over Java applets?
 - c. Write a Java program to display the month names by JList and display the Days by JComboBox.
 - d. What is JDBC? What is its role in application development? Describe JDBC in detail with suitable example.
 - e. What do you mean by dynamic modeling? What is the significance of dynamic modeling in Object Oriented Development? Explain.

SECTION C

- 3. Attempt any one part of the following: 10 x 1 = 10**
- (a) Write a Java program to display the month names by JList and display the Days by JComboBox.
 - (b) Explain the role of RMI in Java. Difference between RMI and RPC.

4. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) What is Method overloading and Method overriding? Write a program to Method overriding in java?
 - (b) What is object and class concept? Explain the different layouts available in Java? Explain each with suitable skeleton code.
5. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) By means of a diagram show the various streams found in the java.io_package? Write a program to demonstrate how to use a stream Tokenizer to count the number of words in a file.
 - (b) Write a program in Java to demonstrate communication using TCP/IP i.e. using sockets:-
Write a separate code for a server and client program. The program should display the contents of the file specified in a server on to the client.
6. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) What is the difference between adaptive and non-adaptive routing? Explain any one adaptive and one non-adaptive routing protocol.
 - (b) What are bridges and gateways? Explain their functions briefly.
7. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) What are the characteristics of JDBC? What are the various steps for using JDBC? Write a program to demonstrate these steps.
 - (b) Do the following :
 - (i) What is RMI? What is the difference between Naming.bind and Naming.rebind method? Write a short code to invoke a remote method using Java RMI.
 - (ii) Explain briefly the life cycle of a servlet. What are the basic steps for creating a servlet?