END TERM EXAMINATION

THIRD SEMESTER [MCA] NOVEMBER-DECEMBER 2017

Paper Code: MCA-205	Subject: Java Programming
Time: 3 Hours	Maximum Marks: 75

Note: Attempt any five questions including Q.no.1 which is compulsory. Select one question from each Unit.

Q1   Answer the following: **(10x2.5=25)**
    (a) What is java virtual machine? Explain briefly.
    (b) Why do we need wrapper class? Mention any two predefined wrapper classes.
    (c) A server socket needs to be bound to a specific port, not client socket, why?
    (d) What are ways of creating our own thread? Explain with an example.
    (e) Differentiate between interface and abstract class.
    (f) Define java applet and mention the life cycle of an applet.
    (g) What are the steps involved in establishment of a JDBC connection?
    (h) What do you understand by JavaBean?
    (i) Compare AWT and Swing.
    (j) Explain event delegation Model.

Unit-I

Q2   (a) Explain the JVM architecture in detail?   **(5)**
    (b) Discuss the access specifiers in java.   **(5)**
    (c) Why do we need constructor? Can we overload the constructor? How? **(2.5)**

Q3   (a) Write a program to arrange odd numbers in left side and even number on the right side. The numbers should be entered using keyboard. **(6)**
    (b) Explain the Super Keyword in the context of constructor, method and variable?   **(6.5)**

Unit-II

Q4   (a) Explain the exception handling keywords with the support of an example?   **(7.5)**
    (b) Write a client/server application to implement a dictionary in which client will send a word to the server and server provides the meaning of word to the client.   **(5)**

Q5   (a) What is meant by stream? What are the types of streams and classes of the streams? Explain in brief.   **(3)**
    (b) What do you understand by synchronization? Discuss with an example.   **(6)**
    (c) Describe the file class functions. Write a program to copy the contents from one file to another.   **(3.5)**

Unit-III

Q6   (a) Explain the various layout managers.   **(5)**

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(b) Write an applet to display odd and even number using two different threads. Odd number must be in green colour and even number in blue colour. **(5)**

(c) Why do we need adapter class? Justify using example. **(2.5)**

Q7 (a) Create a Login Frame that accepts username and password. It should validate against the database when click on OK button, otherwise all fields should be reset when click on reset button. **(6.5)**

(b) Write a vector based program to: **(4)**

    (i) Create a vector with initial capacity of 6 element.

    (ii) Decrease the size by 2 element.

    (iii)Display all the elements from vector.

    (iv)Find a specific value from a vector on the user choice and replace it with new value.

(c) Give examples of collection classes. **(2)**

Unit-IV

Q8 (a) Write short notes on RMI architecture. **(5)**

(b) What is swing? Explain the advance controls of swings. **(7.5)**

Q9 Explain the architecture of java bean. Write an example that illustrate how to create a bean and how to add customizable properties to a Java bean and how to generate and receive property change events. **(12.5)**

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