MASTER OF COMPUTER APPLICATION
Third Semester
PROGRAMMING WITH JAVA
(MCA – 14)

Duration: 3Hrs.

Full Marks: 70

Part-A (Objective) =20
Part-B (Descriptive)=50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

Answer any *five* of the following questions:

1. What is an applet? Write the differences between applets and application. Write a java program to create both a vertical and a horizontal scroll bar and to display the current settings of the scroll bars. (2+3+5=10)

2. What is an exception? Explain the use of the keywords "throw" and "throws". Write a java program using try and catch to handle an arithmetic exception divide by zero. (1+4+5=10)

3. What are the foundation classes? What is swing? Write a program using Swing components to create a GUI for asking "What is your hobby?" There are five checkbox options are – Reading, Music, Painting, Movies, and Dancing.

(2+2+6=10)

4. What is the use of sockets? What are the types of sockets? Write a program that connect to a "whois" port on the InterNIC server, sends the command-line argument down the socket, and then prints the data that is returned. (2+2+6=10)

5. What do you mean by Abstract class? Declare an abstract class "Figure" which has two instance variable "dim1" and "dim2". A constructor to initialize the two instance variables and the abstract class has an abstract method area(). Now declare

two classes Rectangle and Triangle, which will extends the "Figure" class and both the classes override the area() method to calculate the area of their own. Declare another class in which object of Rectangle and Triangle will be created and the area of triangle and rectangle will be displayed. (3+7=10)

6. Explain the use of "final" keyword in java. What is an interface? Declare an interface named Callback, which has a method callback(). Write a java program to declare a class which will implement interface Callback. (2+ 3+5=10)

7. What do you mean by thread in java? How threads are created in java? Write a java program to create a new thread implementing the Runnable interface. (2+2+4=10)

8. Explain the use of "continue" and "break" statement. What is constructor? Define a class "Box", which has three instance variables – width, height, depth and a parameterized constructor and a method to compute volume of the box. Another class "BoxDemo" is defined where main function will be there and an object of the class "Box" is created to display the volume of the box. (3+2+5=10)

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Duration: 20 minutes   **Marks – 20**

(PART A- Objective Type)

I. Answer the following: **1×20=20**

1. What is the name of the method used to start a thread execution?
   A. init()   B. start()
   C. run()   D. resume()

2. In how many states thread can be explained?
   A. 4   B. 5   C. 3   D. 2

3. JVM stands for
   A. Java Verified Machine   B. Java Virtual Machine
   C. Java Very Large Machine   D. Java Very Small Machine

4. JRE stands for
   A. Java Real Environment   B. Java Real Enterprise
   C. Java Runtime Environment   D. None of the mentioned

5. Which of the following statements about the Java language is true?
   A. Java supports only procedural approach towards programming.
   B. Both procedural and object oriented programming are supported in java.
   C. Java supports only object oriented programming approach.
   D. None of the above.

6. Java source codes are compiled and converted to
   A. Objectcodes   B. Assemblycodes
   C. Binarycodes   D. Bytecodes

7. Default priority value of a thread class for NORM_PRIORITY is: ………………………

8. Which of these packages contains classes and interfaces for networking?
   A. java.io   B. java.util
   C. java.net   D. java.netwok

9. Which of these is a protocol for breaking and sending packets to an address across a network?
   A. TCP/IP   B. DNS   C. Socket   D. Proxy Server

10. How many ports of TCP/IP reserved for specific protocol?
    A. 10   B. 1024   C. 2048   D. 512

11. How many bits are in a single IP address?
    A. 8   B. 16   C. 32   D. 64

12. Which of these classes is not a member class of java.io package?
    A. String   B. StringReader   C. Writer   D. File

13. Which of these classes is not related to input and output stream in terms of functioning?
    A. File   B. Writer
    C. InputStream   D. Reader

14. The default layout of an Applet is BorderLayout.   **True/False**

15. We pass parameters to an applet through the <param> tag in the HTML file.   **True/False**

16. Which method is used to print a message "Hello" on the screen using an applet?
    A. g.drawText("Hello", 10, 10);
    B. g.drawMessage("Hello",10,10);
    C. g.drawString("Hello", 10, 10);
    D. g.printLine("Hello", 10,10);

17. Which of the following is a method of the ActionListener interface?
    A. actionDone()   B. actionTaken()
    C. actionPerformed()   D. actionFinished()

18. Packages in java are similar to class libraries.   **True/False**

19. The five keywords which manage exception handling in java are: ....,

    ...., ..., ..., ...

20. The "finally" statement can be used only in conjunction with a *try* block.   **True/False**

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