



**MASTER OF COMPUTER APPLICATION**  
**Third Semester**  
**PROGRAMMING WITH JAVA**  
**(MCA - 304)**

**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 four from Question no. 2 to 8**  
**Question no. 1 is compulsory.**

1. Explain how AWT is different from Swing? Write a java swing program to implement a simple calculator (addition, subtraction, multiplication and division).  
(10)
2. List at least five major differences between C++ and Java. How Java is strongly associated with the internet? Write a program to Count the total number odd and even digit of a given number.  
(3+3+4=10)
3. What is an applet? How do applets differ from application programs? Write an applet program to find sum of two numbers.  
(2+3+5=10)
4. What is a constructor? Write a java program to implement constructor and its use. What is inheritance and how does it help us create new classes quickly?  
(2+3+5=10)
5. What is an exception? Explain the types of error. List some of the most common types of exception that might occur in java with example. Write a program to implement ArithmeticException.  
(2+2+3+3=10)



6. What is thread? Explain the concept of multiprocessing and multithreading.

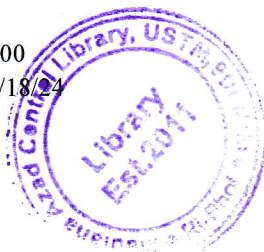
Describe the complete life cycle of a thread. (2+2+6=10)

7. What is a stream? How is the concept of streams used in java? How are the stream classes classified explain with example? (2+2+6=10)

8. What is socket programming? Explain the steps for establishing TCP connection between two computers using sockets. What is an interface? Write a java program to find area of a rectangle and circle using interface. (2+2+2+4=10)

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**Duration: 20 minutes**

**Marks – 20**

**(PART A - Objective Type)**

**I. Choose the correct answer:**

**1×20=20**

1. Which of the following statements are true?
  - i. Java does not support global variables.
  - ii. Java support template classes as in C++.
  - iii. Java does not use pointer.
  - iv. Java support operator overloading.

a. i and ii      b. i and iii      c. ii and iv      d. i and iv
2. Which of the following keyword must be used to monitor exceptions?
  - a. try      b. through      c. catch      d. finally
3. Which of the following class is used by character stream for input and output operations?
  - a. Input Stream      b. Read Stream
  - c. Writer      d. InputStream
4. In Java arrays are
  - a. Objects      b. Object references
  - c. Primitive data Type      d. None of the above
5. Analyse the following code and choose the correct answer:  
`int[] arr=new int[5];  
arr=new int[6];`
  - a. The code has compile errors because the variable arr cannot be changed once it is assigned.
  - b. The code has runtime errors because the variable arr cannot be changed once it is assigned.
  - c. The code has compile errors because we cannot assign a different size array to arr.
  - d. The code can compile and run fine. The second line assigns a new array to arr.
6. Package of drawstring() method is:
  - a. java.applet      b. java.io
  - c. javax.swing      d. java.awt
7. Which of the following is a component in AWT that can contain another component like button, textfield, labels etc.?
  - a. window      b. panel      c. frame      d. container

8. Which of the following keyword is used to define package in Java?  
a. pkg                      b. Pkg                      c. package                      d. Package
9. Which of the following is incorrect statement about packages?  
a. Package defines a namespace in which classes are stored.  
b. A package can contain other package within it.  
c. Java uses file system directories to store packages.  
d. A package cannot be renamed without renaming the directory in which the classes are stored.
10. The command javac  
a. Convert a java program into binary code.  
b. Convert a java program into byte code.  
c. Convert a java program into machine language.  
d. None of the above.
11. Which of the function is called to display the output of an applet?  
a. display()                      b. paint()  
c. displayApplet()                      d. printApplet()
12. Which method will a web browser call on a new applet?  
a. main method                      b. destroy method  
c. execute method                      d. init method
13. Which of the following method can be used to make the main thread to be executed last among all the threads?  
a. sleep()                      b. stop()                      c. notify()                      d. start()
14. What is the default value of priority variable MIN\_PRIORITY and MAX\_PRIORITY?  
a. 0 and 256                      b. 0 and 1                      c. 1 and 10                      d. 1 and 256
15. Which class cannot be sub classed (or extended) in java?  
a. Abstract class                      b. Final class  
c. Parent class                      d. None of the above
16. Suspend thread can be revived by using  
a. start() method                      b. resume() method  
c. suspend() method                      d. yield() method
17. The new operator in java  
a. Returns a pointer to a variable.  
b. Creates a variable called new.  
c. Tell compiler how much memory is available.  
d. Obtains memory for a new variable.
18. The client in socket programming must know which of the following information  
a. IP Address of server                      b. Port number  
c. Both a and b                      d. Only b

19. What does the AWT stand for?

- a. Application with types
- c. Absolutely wonderful toolkit

b. A web toolkit

d. Abstract Windows toolkit

20. Which among the following is the compulsory section of java program?

a. package Statement

b. Class declaration Section

b. import Statement

d. Documentation Section

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