

# Question Paper

Exam Date & Time: 03-Dec-2018 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

### INTERNATIONAL CENTRE FOR APPLIED SCIENCES II SEMESTER B.S. ENGINEERING END SEMESTER EXAMINATION- NOVEMBER/DECEMBER 2018 Java Programming [CS 124]

Marks: 100

Duration: 180 mins.

#### Answer 5 out of 8 questions.

- 1) With examples, explain and demonstrate the difference between right shift and unsigned right shift operator. (6)
  - A)
  - B) Explain the following Java features. (8)
    - i) Object oriented
    - ii) Robust
    - iii) Architectural neutral
    - iv) Byte code
  - C) With syntax, explain the for each version of for loop in java. (6)  
Write a program to find the sum of all elements of an integer array using for each version of for loop.
- 2) Explain how interfaces are different from abstract classes. (6)
  - A)
  - B) How are objects passed as parameters to methods in Java? (6)  
Explain with the help of an example.
  - C) Explain constructors. With the help of an example, demonstrate overloading of constructors. (8)
- 3) What is the difference between overloading and overriding? Explain with suitable examples. (8)
  - A)
  - B) Find errors in the following java program: (4)

```

class A{
    public void static(string s[]) {
        int x;
        if(x==10) {
            int y=20;
            x=x*y;
        }
        y=100;
        int bar=1 ;
        {
            int bar=2;
        }
    }
}

```

- C) With relevant example programs, explain two general forms of Super. (8)
- 4) Create a class called Balance containing instance variables name and balance. Include a parameterized constructor. (6)
- A) Include a method show() which displays name and balance. Put the above in a package called BalPack. Write a program outside the BalPack package which instantiates the Balance class and calls method show().
- B) List the different access specifiers used in inheritance. How are they useful? (6)
- C) Differentiate between checked and unchecked exceptions. Write a program which contains one method which will throw `IllegalAccessException` and use proper exception handlers so that exception should be printed, when this method is called. (8)
- 5) What is multithreading and how is it achieved in java? (8)
- A) Write a program to demonstrate multiple threads. Each thread should display numbers from 1 to 5 in an interleaved fashion. Use proper exception handling mechanism.
- B) Write an applet program to output a message to the status window of the applet viewer. (6)
- C) Write a program to copy the contents of one file to another using byte stream. The names of files are passed as command line arguments. (6)
- 6) What are the two different ways of achieving (10)

- A) synchronization in multithreading? Explain with an example.
- B) When is a KeyEvent generated? Explain different types of key events. Write a program to handle Keyboard Events. (6)
- C) List and explain Pre-defined streams in JAVA. (4)
- 7) Write the steps required to access a database using JDBC. (6)
- A)
- B) Explain the life cycle of an applet with the help of an applet skeleton. (8)
- C) Explain event delegation model in Java. (6)
- 8) Write a Swing applet to create 3 radio buttons red, green and blue and a label which displays the colour selected when 1 of the radio buttons is clicked. (8)
- A)
- B) Write a Java program to demonstrate various mouse events. (6)
- C) Explain the FlowLayout and GridLayout in detail. (6)

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