Total No. of Questions : 8]

SEAT No. :

PF-4945

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T.E. (Electronics Engineering / E & TC / EC-ACT)
FUNDAMENTALS OF JAVA PROGRAMMING
(2019 Pattern) (Semester - V) (304185C) (Elective - I)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates :

1) ***Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Explain **[6]**

i) Super Class

ii) Sub Class

iii) Reusability

With reference to inheritance in Java

b) Compare method overloading with method overriding. **[5]**

c) An election is contested by 3 candidates. The candidates are numbered from 1 to 3. Voting is done by counting the candidates number on the ballot paper. Write a program using Java to read the ballot and count the votes cast for each candidate using an array variable count. In case if the number marked by the voter is outside 1 to 3, then ballot should be considered as a spoilt ballot and the program should also count the number of the spoilt ballot. Consider voting is done by 10 voters. **[7]**

OR

Q2) a) What are the types of inheritance supported by java. **[3]**

b) Write a program to compare two strings. **[7]**

c) Explain the concept of abstract class and abstract method using suitable example. **[8]**

P.T.O.

Q3) a) Explain the concept of hidden class in package with the help of suitable example. **[7]**

b) Which is the package by default imported in every Java program? Why? **[3]**

c) Correct the following code to rectify the compile error generated if any and justify your answer, Rewrite the corrected code. **[7]**

```
interface NewShape {
        void draw( );
}
class NewCircle1 implements NewShape{
        public void draw( ) {
                System.out.println("New Circle1 drawn");
        }
}
class NewCircle2{
        public void draw( )
        {
                System.out.println("New Circle2 drawn");
        }
}
public class CastInterface {
        public static void main(String[] args) {
                // TODO Auto-generated method stub
                NewShape obj1 = new NewCircle1( );
                NewShape obj2 = new NewCircle2( );
                obj1.draw( );
                obj2.draw( );
        }
}
```

OR

Q4) a) What is an interface? How to declare interface into a java program? Explain with the help of the suitable example. **[9]**

b) What is a Java package? With suitable example explain how to create and access package. **[8]**

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Q5) a) Differentiate between multithreading and Multitasking. **[5]**

b) Write a program to handle ArrayIndexOutOfBounds exception. **[5]**

c) Write a program to create an applet which will display "Hello World". **[8]**

OR

Q6) a) Write a suitable program explaining the way of throwing our own exception in Java. **[8]**

b) Describe the complete life cycle of thread. **[6]**

c) How to stop a thread in Java? Explain with the help of suitable example. **[4]**

Q7) a) What is meant by AWT? What are limitations of AWT? Explain handling events on AWT components. **[9]**

b) Write a Java program using Swing to create label. **[8]**

OR

Q8) a) List difference between swing and AWT in Java. **[5]**

b) Write a Java program using Swing to display "Hello World". **[8]**

c) Explain the FileReader and FileWriter class in Java. **[4]**

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