[This question paper contains 4 printed pages.]

4700   *Your Roll No.* ....

Attempt **All** *questions.*
Attempt all parts of a question together.

1. (a) What are constructors ? What do you understand
        by constructor overloading ? Explain with an
        example.   (3)

    (b) Write a program to check whether number is
        prime or not. Accept a number from the command
        line.   (2)

2. (a) What do you understand by final variable, final
        method and final class ? Explain with examples.
                            (3)
    (b) Explain two uses of keyword 'super' ?   (2)

3. (a) What are interfaces ? Can we declare variables
        in an interface ? Justify.   (2)

                            P.T.O.

(b) What are abstract methods ? How are they different from other methods ? (2)

(c) Write a program to copy the contents of one file to another. Handle the exceptions that can occur in the code. (3)

4. (a) What is polymorphism ? How is mu time polymorphism implemented in Java ? (3)

(b) What is the difference between 'throw' and 'throws' ? (2)

5. What will be output of following codes – (2×1=2)

(a)
```
Class A
{
   public static void main (string s[ ])
   {
      string str1, str2;  str1 = new string("Hello");
      str2 = new string (str1);
      If (str1 = = str2)
         System.out.print("True");
      else
         System.out.print("False");

      If (str1.equals (str2))
         System.out.print("True");
      else
         System.out.print("False");
```

(b) Class A

```
{   public static void main (string s[ ])
    {   int   a = 0;
        for (; ;)
        {
            System.out.println(++a);
        If (a* = = 10)
            break;
        }
    }
}
```

6. (a) What are Applets ? Explain the methods init( ), start( ) & paint( ) with examples.   (4)

    (b) Create an Applet, which handles Keyboard events and prints the characters pressed.   (3)

7. (a) What are static methods ? Can a static method refer to a nonstatic variable ? Why is main( ) method declared as static ?   (3)

    (b) What is a thread ? How are thread's priorities assigned ?   (2)

8. (a) Find out the error(s) in the following codes :–
                                              (1×2=2)

(i) Class A

```
{    int a = 10;
     private int b = 20;
     public int c = 30;
}
Class B extends A {
     void print( ) {
     System.out.println(a);
     System.out.println(b);
     System.out.println(c);
}
public static void main (string args[ ])
     {
         print( );
     }
}
```

(ii)   Class A

```
{ private static void main(string s1[ ])
     {
         string s2;
     BufferedReader br = new BufferedReader(new
               (Input Stream Reader ((System.in));
     s2 = br. read line ( );
     }
}
```