

058102

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[This question paper contains 8 printed pages]

Your Roll No. :

Sl. No. of Q. Paper : 1811 GC-4

Unique Paper Code : 32341201

Name of the Course : **B.Sc.(Hons.) Computer Science**

Name of the Paper : Programming In Java

Semester : II

Time : 3 Hours **Maximum Marks : 75**

Instructions for Candidates :

- Write your Roll No. on the top immediately on receipt of this question paper.
- Attempt **all** questions from **Section A**.
- Attempt any **four** questions from **Section B**.

SECTION - A

- What is the difference between String and StringBuffer classes? What is the role of replace () function in String class? 2
mutable char with another
 - When Integer ("abc") is called, what kind of exception is thrown? *Number format exception* 2
 - Write code in java to create an applet that displays a label with the caption "Welcome". 2
 - Differentiate between == and equals () method as applied to String objects. 2

P.T.O.

(v) Is the following statement.

```
void vaTest (int .....v)
correct ? Comment.
```

2

(vi) What are the two ways to create a thread ?
Write a code segment to create a class
my Thread using both the ways.

3

(vii) Define an Enumeration Day with values
(Mon, Tue, Wed, Thu, Fri, Sat, Sun). Write
a code segment to display all values of
enumeration Day. What is the result of
ordinal () method ?

4

(viii) What is the purpose of param tag in case
of applets ? How are parameters retrieved
using the method get Parameter () ? Give
an example.

4

(ix) Given an integer variable int a = -1, what
is the output for a >>24 and a >>>24 ?

4

(x) What is the error in the following codes :

4

a. int a (10);

```
System.out.println (a [2]);
```

b. class A

```
{
public static void main (String args [ ])
{
```

```
L1: for (int i=0; i<4; i++)
```

```
{
System.out.print ("Pass" + i + ":
}
```

```
for (int j=0; j<100; j++)
```

```
{
if (j==10) break L1;
System.out.print (j + " ");
}
}
```

(xi) State the use of keywords final, finally and
finalize () in Java.

6

SECTION - B

2. (i) Write a for-each loop to find sum of all
elements of an integer array.

2

(ii) What are static functions ? Can a static
method access a non-static data or method ?
Explain with the help of suitable example.

4

(iii) Write a Java code segment to create a
mutable string with size 30 bytes and store
"Hello" in that. What is the output of length ()
and capacity () function on the created
string ?

4

3. (i) How does an interface differ from a class in Java ? Define an interface which has a method to convert length given in inches to centimeters (one inch=2.54 cm). Define a class called rectangle that implements the interface and finds area in cm² given its side in inches. 4

(ii) Consider the following files f1. java and f2. java : 6

```
f1.java
package myPack1;
public class A
{
```

```
    int i;
    private int j ;
    protected int k;
    public int l;
    :
```

```
}
class B
```

```
{
    :
}
```

```
class C extends A
```

```
{
    :
```

i k l

i k l

```
}
f2. java
package myPack2;
import myPack1.*;
class D
```

```
{
    : l
}
```

```
class E extends A
```

```
{
    : k, l
}
```

Which variables of class A are accessible in classes B,C,D and E ? Why ?

4. (i) What do you understand by AWT controls ? List name of two AWT controls. 2

(ii) What is the purpose of getsize () and setsize () functions in case of Window class ? 2

(ii) Write a java program to read a text file and display its contents. Name of the file is input from command line. Also handle the appropriate exceptions. 6

5. (i) What is the advantage of using try-with-resources statement? Give an example. 3

(ii) Write a Java code segment to read name of student from the command line. If the first letter of the name is not a capital letter, then throw an exception. 3

(iii) What is the output of following code : 4

```

class PassObjRef
{
    public static void main (string args[ ])
    {
        Test ob=new Test (15,20);
        int k = 10;
        System.out. print In ("ob.a, ob. b, k
        before call: " + ob.a + ob.b + k);
        ob.meth (ob,k);
        System. out. print In ("ob.a, ob.b, k
        after call: " + ob.a + ob.b + k);
    }
}
class Test
{
    int a,b;
    Test (int i, int j)
    {
        a=i;
        b=j;
    }
}
    
```

15 20 10 (1)
30 10 10 (3)

```

}
void meth (Test o, int index)
{
    o.a *=2;
    o.b /=2;
    index = index *10;
}
    
```

6. (i) Write a Java Applet to display "Hello World" in blue color. 4

(ii) What do you understand by event listener interfaces? Name event listener interface that is notified when following event occur : 6

- (a) When component is resized
- (b) When mouse is pressed
- (c) When mouse is moved
- (d) When window gains or loses input focus

7. (i) Give output of following: 2

```

Class A
{
    public static void main (String args [ ])
    {
    }
}
    
```

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```
Boolean b=true;
if (b) System.out.println("b is true");
    character ch= 'x';
    char ch2=ch;
    System.out.println("ch2 is " + ch2);
    }
}
```

*b is true
ch2 is x*

(ii) What is checked exception? How is it different from unchecked exception? Give an example of each. (3)

(iii) State the purpose of each of the following methods in context of a thread: (5)

- (a) run ()
- (b) sleep ()
- (c) start ()
- (d) join ()
- (e) is Alive ()

Regular duties

① 24m

② 27E

③ 30m

④ 1E

Sold duties

↳ 31

+ 30E