

1811

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

(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 ()

16-5-17 Morning  
Tuesday

[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 :

(a) Write your Roll No. on the top immediately on receipt of this question paper.

(b) Attempt **all** questions from **Section A**.

(c) Attempt any **four** questions from **Section B**.

**SECTION - A**

1. (i) What is the difference between String and StringBuffer classes ? What is the role of replace () function in String class ? 2

(ii) When Integer ("abc") is called, what kind of exception is thrown ? 2

(iii) Write code in java to create an applet that displays a label with the caption "Welcome". 2

(iv) Differentiate between == and equals () method as applied to String objects. 2

(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 cm<sup>2</sup> 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
```

```
{
```

```
    :
```

```
}
```

```
}
f2. java
```

```
package myPack2;
```

```
import myPack1.*;
```

```
class D
```

```
{
```

```
    :
```

```
}
```

```
class E extends A
```

```
{
```

```
    :
```

```
}
```

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;
```

6

```
}
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

- When component is resized
- When mouse is pressed
- When mouse is moved
- 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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