

UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA

Department of Software Engineering

3rd Semester Mid Examination

Subject: Object Oriented Programming

Time: 50 minutes

Date: 31/10/2011

Marks: 70

Reg #: _____

OBJECTIVE

Question # 01. Encircle the correct options.

[35*2]

- 1) What is the result when you try to compile the following code?

```
class test{
    public static void main(String args[])
    {
        String s= "HelloWorld";
        if((s!=null) && (s.length() > 6))
            System.out.println("The value of s is " + s);
    }
```

- a) Compile time error
 - b) Runtime error
 - c) No output is printed
 - d) The value of s is HelloWorld is printed on the screen
- 2) Choose the valid identifiers?
- a) int100
 - b) byte
 - c) aString
 - d) a-big-Integer
 - e) Boolean
- 3) Choose all the correct answers?
- a) int a[][]=new int[20][20];
 - b) int []a[]=new int[20][];
 - c) int [][]a=new int[10][];
 - d) int [][]a=new int[][10];
- 4) Select the equivalent answer for the code given below?
- ```
Boolean b=true;
if(b){ x=y;}
else {x=z;}
```
- a) x=b ? x=y : x=z;
  - b) x=b ? y : z;
  - c) b=x ? y : z;
  - d) b=x ? x=y : x=z;
- 5) Select all the correct answers from the following?
- ```
int a= -1;
int b= -1;
a=a>>>31;
b=b>>>31;
```
- a) a=1, b=1
 - b) a=-1, b=-1
 - c) a=1, b=0
 - d) a=1, b=-1
- 6) Which of the following statements will return false? If given the following:
- ```
String s=new String("New Year");
String s1=new String("new Year");
```
- a) s==s1;

- b) `s.equals(s1);`  
 c) `s=s1;`  
 d) None of the above
- 7) What do you see on the screen when you compile and run the following code?
- ```
byte Byte=10;
byte Double=12;
byte Integer=Byte*Double;
```
- a) 120
 b) Compile time error while declaring variables
 c) **Compile time error while multiplying**
 d) None of the above
- 8) What will happen when you try to compile and run the following code:
- ```
class test{
 public static void myTest()
 { System.out.println("Printing myTest() method");}
 public void myMethod()
 { System.out.println("Printing myMethod() method");}
 public static void main(String args[])
 {
 myTest();
 myMethod(); } }
```
- a) **Compile time error**  
 b) Compiles successfully  
 c) Error in main method declaration  
 d) Prints on screen Printing myTest() method followed by Printing myMethod() method
- 9) What will happen if you try to compile and run the following code:
- ```
class test{
    public static void main(String args[])
    {
        int anar[]=new int[5];
        System.out.println(anar[0]); } }
```
- a) Error: anar is referenced before it is initialized
 b) null
 c) **0**
 d) 5
- 10) Which of the following will compile without error:
- a) `int i=0;`
`if(i)`
`{System.out.println("Hello");}`
- b) `boolean b=true; Boolean b2=true;`
`if(b==b2)`
`{ System.out.println("So true");}`
- c) `int i=1;`
`int j=2;`
`if (i==1 || j==2)`
`{System.out.println("OK");}`
- d) `int i=1;int j=2;`
`if (i==1 & j==2)`
`{System.out.println("OK");}`
- 11) Given the following declarations
`String s1=new String("Hello");`
`String s2=new String("there");`
`String s3=new String();`
 Which of the following are legal operations?
- a) `s3=s1+s2;`
 b) `s3=s1-s2;`

- c) s3=s1&s2;
d) s3=s1 && s2;
- 12) In the following code, what code should be placed after the comment **//Here** that will print out 5
- ```
class test{
 public static void main(String abc[]){
 int x=5;
 //Here}}
```
- a) System.out.println(x++);  
b) System.out.println(++x);  
c) System.out.println(x);  
d) System.out.println(x--);  
e) System.out.println(--x);
- 13) What will happen when you attempt to compile and run this program
- ```
class Outer{
    String name="Outer";
    public static void main(String abc[])
    {Inner i=new Inner();
    i.showName();}
    class Inner{
        String name=new String("Inner");
        void showName()
        { System.out.println(name);
        }}}
```
- a) Compile and run with output of "Outer"
b) Compile and run with output of "Inner"
c) Compile time error because Inner is declared as private
d) Compile time error because of the line creating the instance of Inner
- 14) Given the following variables
- ```
char c = 'c';
int i = 10;
double d=10;
long l=1;
String s="Hello";
```
- Which of the following will compile without error?
- a) c=c+i;  
b) s += i;  
c) i += s;  
d) c += s;
- 15) What results by trying to compile and run the following code?
- ```
byte b= 125;
byte b2=100;
b= b*b2;
```
- a) The code executes well and the final value of b is 12500
b) The code doesn't compile
c) The code compiles but throws an exception saying that overflow has occurred.
d) The code executes well and the final value of b is 212 because a byte is 8 bits long.
- 16) What is the result of the following operation?
- ```
System.out.println (9 & 5);
```
- a) 45  
b) 0  
c) 1  
d) 9
- 17) What results from the following code fragment?
- ```
int i= 5;
```

```
int j= 10;  
System.out.println(i+ -j);
```

- a) Compilation error because '-' doesn't operate on integers
- b) -5
- c) -6
- d) 15

18) Which of the following are legal identifiers?

- a) 2variable
- b) variable2
- c) _whatavariabale
- d) _3_
- e) \$anothervar

19) What is the maximum value that can be assigned to a variable of type byte?

- a) 2^8
- b) 2^7
- c) $2^8 - 1$
- d) $2^7 - 1$

20) What results from running the following code?

```
int a= 0, b= 4, c= 5;  
if(a>2)  
{  
    if(b<5)  
    { System.out.println("one");}  
    else  
    { System.out.println("two");}}  
else if (c< 5)  
    { System.out.println("three");}  
else  
    { System.out.println("four");}
```

- a) one
- b) two
- c) three
- d) four

21) Which of the following is not reserved word?

- a) goto
- b) synchronized
- c) export
- d) volatile

22) After execution of the following code, what is the value of a?

```
byte a;byte b=2;byte c=-3;  
if (! (~b > 3))  
{ a=b;  
System.out.println(a);}  
else  
{ a=c;  
System.out.println(a);}
```

- a) 2
- b) -3
- c) 0
- d) None of the above

23) What is the result of the following operation?

```
System.out.println (4 | 3);
```

- a) 6
- b) 0
- c) 1
- d) 7

24) Which one is true about the code below:

```
class test{  
    static int a=7;  
    static {a+=5;}
```

```

public static void main(String args[])
{ System.out.println("a="+a); }
static {a/=3;}

```

- a) The code will not compile as method names and return types are missing in static blocks
- b) The code runs and prints 4**
- c) The code runs and prints 12
- d) The code runs and prints 7

25) Given the following code, what test would you need to put in place of the comment line "//place test here" to result in an output of Equal

```

class Eqtest{
    public static void main(String args[])
    { Eqtest e=new Eqtest();}
    Eqtest()
    {String s="Java";
    String s2="java";
    //place test here
    {System.out.println("Equal");}
    else
    {System.out.println("Not Equal");} } }

```

- a) if(s==s2)
- b) if(s.equals(s2))
- c) if(s.equalsIgnoreCase(s2))**
- d) if(s.noCaseMatch(s2))

26) Consider the following code and select the correct statement

```

class test{
    static int x;
    public static void main(String args[])
    { x=x+1;
    System.out.println("Value is: "+x);}}

```

- a) The code fails to compile
- b) Prints- Value is: 1**
- c) Null pointer exception
- d) None of the Above

27) If you compile and run the following code, which statements would be the part of output:

```

for(int i=0;i<5;i++)
for(int j=0;j<5;j++)
{if(i!=j)
continue ;
System.out.println("i= "+i+" j= "+j);}

```

- a) i= 0 j= 0**
- b) i= 1 j= 2
- c) i= 1 j= 1**
- d) i= 2 j= 2**
- e) i= 5 j= 5

28) What is displayed when the following code is executed:

```

String s1=" Hello World ";
String s2=s1.trim();
System.out.println(s1);

```

- a) " Hello World "**
- b) "Hello World "
- c) "Hello World"
- d) " Hello World"
- e) None of the Above

29) Analyze the following code and select valid statement

```

void loop()
{
    int x=0;
    one:
    while(x<10)
    {
        two:
        System.out.println(++x);
        if(x>3)
            break two;
    }
}

```

- a) This code compiles
- b) This code does not compile**

30) What is displayed when the following is executed?

```

String s1="aaa";
s1.concat("bbb");
System.out.println(s1);

```

- a) The string "aaa"**
- b) The string "aaabbb"
- c) concat() is not valid method in String class
- d) The string "bbb"
- e) The string "bbbbaaa"

31) What results by running the following code fragment:

```

int a=8;
int b=3;
float f=a++/b--;
System.out.println(f);

```

- a) 3.0
- b) 4.5
- c) 2.0**
- d) 2.6

32) What would be the result of running the following program:

```

class test
{
    public static void main(String abc[])
    {
        int a=5;
        System.out.println(" Hello World" + a + 5);
    }
}

```

- a) Compilation Error
- b) Hello World10
- c) Hello World55**

33) char in Java is the same as char in C or C++

- a) True
- b) False**

34) What would be the result of running the following program:

```

class test
{
    public static void main(String abc[])
    {
        int p=555;
        byte r=(byte)p;
        System.out.println(r);
    }
}

```

- a) 43**
- b) 47
- c) Compilation Error

35) The Java run-time system makes sure that all array indexes are in the correct range otherwise raises a compile-time error.

- a) True
- b) False**

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SUBJECTIVE

Q # 02: [10]

Write a program using *while loop* that initializes a double variable to 5 and then displays the next 10 numbers mentioning whether the numbers are even or odd. It should calculate and display the sum and average of the numbers.

Q # 03: [10]

Write a program that create a String object named *country* and initialize it with "PAKISTAN". Do the following operations on this String object:

- a) Determine the length of this word.
- b) Determine the index of letter 'S'.
- c) Determine the index of "IST".
- d) Determine the last index of letter 'A'.
- e) Convert this String into lowercase.
- f) Convert this lowercase String into uppercase.

Q#04: [10]

Write a program that inputs a postfix expression from user, evaluate that expression and displays the result.