Exam 1: QUESTIONS

Question 1 of 8

What will be the result of attempting to compile and run the following code?

```
public class PromotionTest
{
   public static void main(String args[])
   {
      int i = 5;
      float f = 5.5f;
      double d = 3.8;
      char c = 'a';
      if (i == f) c++;
      if (((int) (f + d)) == ((int) f + (int) d)) c += 2;
      System.out.println(c);
   }
}
```

Select 1 correct option.

a ○ The code will fail to compile.

b ○ It will print d.

c ○ It will print c.

d ○ It will print b

e ○ It will print a.

Question 2 of 8

Which of the following will compile without any error?

Select 4 correct options

a ☐ "a"+'b'+63

b ☐ "a"+63

c ☐ 'b'+63

d ☐ 'b'+63+"a"

e ☐ 63 + new Integer(10)

Question 3 of 8

Under what situations does a class get a default constructor?

Select 1 correct option.

a ○ All classes in Java get a default constructor.

b ○ You have to define atleast one constructor to get the default constructor.

c ○ If the class does not define any constructors on it's own.

d ○ All classes get default constructor from Object class.

e ○ None of the above.

Question 4 of 8

What is the result of executing the following fragment of code:

```
boolean b1 = false;
boolean b2  = false;
if (b2 = b1 == false)
{
   System.out.println("true");
} else
{
   System.out.println("false");
}
```

Select 1 correct option.

a ○ Compile time error.

b ○ It will print true;

c ○ It will print false;

d ○ Runtime error.

e ○ It will print nothing.

Question 5 of 8

Which of the following are valid at line 1?

```
public class X
{
      line 1: //put statement here.
}
```

Select 2 correct options

a ☐ String s;

b ☐ String s = 'asdf';

c ☐ String s = 'a';

d ☐ String s = this.toString();

e ☐ String s = asdf;

Question 6 of 8

Given:

```
class MySuper
{
        public MySuper(int i) { } //1
}
class MySub extends MySuper
{
}
public class MyTest
{
        public static void main(String[] args)
        {
                new MySub();  //2
        }
}
```

What will be the output when the above code is compiled and run?
Select 1 correct option.

a ○ It will not compile.

b ○ It will throw an exception at run time due to //1

c ○ It will throw an exception at run time due to //2

d ○ It will compile and run without any exception.

Question 7 of 8

What will be the result of compiling the following code:

```
public class Test
{
   public static void main (String args[])
   {
      int i;
      System.out.println(i + ++i);
   }
}
```

Select 1 correct option.

A ○ It will print 0

b ○ It will print 1

C ○ It will print 3

D ○ Runtime error

e ○ Compile time error

Question 8 of 8

Consider the following lines of code...

```
int  a = 0x65;
 byte b = 065;
 char c = 65;
```

Which of the following statements are true?

Select 1 correct option.

a ☐ a == c is true but a == b is not true.

b ☐ Bit patterns for all the three are same.

c ☐ b == c is true but a == b is not true.

d ☐ a > c > b where a is largest and b is the smallest number.

e ☐ None of the above.

SOLUTIONS

Question 1 of 8

```
public class PromotionTest
{
   public static void main(String args[])
   {
      int i = 5;
      float f = 5.5f;
      double d = 3.8;
      char c = 'a';
      if (i == f) c++;
      if (((int) (f + d)) == ((int) f + (int) d)) c += 2;
      System.out.println(c);
   }
}
```

Select 1 correct option.

a ○ The code will fail to compile.

b ○ It will print d.

c ○ It will print c.

d ○ It will print b

e ◉ It will print a.

General CommentsIn the case of i == f, value of i will be promoted to a float i.e 5.0, and so it returns false.
Casting a float or double to int or long simply truncates it. so (int) f + int(d) returns 5 +3 = 8 and int(f +d) => int (5.5 + 3.8) => int(9.3) => 9, so this also return false.
So, c is not incremented at all. Hence c remains 'a'.

Question 2 of 8

Which of the following will compile without any error?
Select 4 correct options

a ☑ "a"+'b'+63

As the first operand is a String all others (one by one) will be converted to String."ab" + 63 => "ab63"

b ☑ "a"+63

As the first operand is a String all others (one by one) will be converted to String."a" + 'b' => "a63"

c ☑ 'b'+63

As the first one is numeric type so, it will give 161 ! 'b' = 98 and 98 +63 = 161

d ☑ 'b'+63+"a"

As the first one is numeric type so, 'b'+63 = 161, 161+"a" = 161a.

e ☐ 63 + new Integer(10)

As none of the operands is a String, the + operator won't work.

General Comments+ is overloaded such that if any operand is a String then it will convert the other operand to a String.
So in 63+"a" and "a"+63, 63 is converted to "63" and 'b' +"a" and "a"+'b', 'b' is converted to "b".
Note that in 'b'+ 63 , 'b' is promoted to an int ie. 98 giving 161.

Question 3 of 8

Under what situations does a class get a default constructor?

Select 1 correct option.

a ○ All classes in Java get a default constructor.

No. If a class defines any constructor, it will not get the default constructor.

b ○ You have to define atleast one constructor to get the default constructor.

A default (no args one) will be given if the class doesn't define any.

c ○ If the class does not define any constructors on it's own.

It will get a no args constructor.

d ○ All classes get default constructor from Object class.

Constructors are NEVER inherited.

e ○ None of the above.

Question 4 of 8

What is the result of executing the following fragment of code:

```
boolean b1 = false;
boolean b2  = false;
if (b2 = b1 == false)
{
   System.out.println("true");
} else
{
   System.out.println("false");
}
```

Select 1 correct option.

a ○ Compile time error.

b ○ It will print true;

c ○ It will print false;

d ○ Runtime error.

e ○ It will print nothing.

General CommentsAll that if() needs, is a boolean, now b1 == false returns true which is a boolean and as b2 = true is an expression and every expression has a return value (which is actually the LHS of the expression), it returns true which is again a boolean.
So there is no error and it prints true;
Note, return value of expression(i is int) : i = 10 , is 10 (an int).