Question paper :
Include: Java, Python, JS and SQL

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## Q1:Write the correct Answer.

```python
def extendList(val, list=[]):
    list.append(val)
    return list

list1 = extendList(-17)
list2 = extendList(53,[])
list3 = extendList('xyz')

print "list1 = %s" % list1
print "list2 = %s" % list2
print "list3 = %s" % list3
```

## Answer: -17,[53],xyz

## Q2: Build a function to draw a pattern.

```
*  *  *  *  *
  *  *  *  *
    *  *  *
      *  *
        *
```

**Answer:** public class ReversePyramidPattern

```java
{
    public static void main(String[] args)
    {
        int rows=5;
        for (int i= 0; i<= rows-1; i++)
        {
            for (int j=0; j<=i; j++)
            {
                    System.out.print(" ");
            }
            for (int k=0; k<=rows-1-i; k++)
            {
            System.out.print("*" + " ");
```

```
                }
                System.out.println();
            }
        }
    }
```

## Q3 Reverse words.

S = "hello How are you?"

Output :

Olleh woh era ?uoy

## Answer:

## Q4 Find first 6 Armstrong numbers.

Hint: Armstrong number is a number that is equal to the sum of cubes of its digits.
For example 0, 1, 153, 370, 371 and 407 are the Armstrong numbers.

## Answer:

153 =(1*1*1)+(5*5*5)+(3*3*3)

```
Import java.util.Scanner
class Armstrong
{
        Public static void main(string[] args)
        {
                Int sum=0,a,temp;
                System.out.println("enter the Number");
                Scanner sc =new Scanner(System.in);
                Int  n= sc.nextInt();
                temp=n;
                while(n>0)
                {
                a=n%10;
                Sum =sum+(a*a*a);
                n=n/10
                }
                if(temp=sum)
                {
                        system.out.println("number is armstrong");
                }
                else
                {
```

```
                    system.out.println("number is not armstrong");
        }

    }
}
```

## Q5 What is the difference between list and tuples in python?

## Answer:

List are mutable and tuples are inmutable

List example: [1,5,6,2,3,] and tuple example: (1,2,3,5,)

## Q6 What will be the Output of the below code?

```
public class A {
    public static void main(String[] args)
    {
        if (true)
            break;
    }
}
```

## Answer:
```
error
```

## Q7 Predict the output of following Java Programs.

```java
class First
{
    public First() {  System.out.println("a"); }
}

class Second extends First
{
    public Second()  {  System.out.println("b"); }
}

class Third extends Second
{
    public Third()   {  System.out.println("c"); }
}

public class MainClass
{
    public static void main(String[] args)
    {
        Second c = new Second();
    }
}
```

## Answer:

a,b

## Q8 What is the output of the following program?

```java
 import java.util.*;

 public class stack
 {
     public static void main(String[] args)
     {
         List<String> list = new LinkedList<>();
         list.add("Geeks");
         list.add("for");
         list.add("Geeks");
         list.add("GeeksforGeeks");
         Iterator<String> iter = list.iterator();

         while (iter.hasNext())
             System.out.printf(iter.next() + " ");

         System.out.println();
     }
 }
```

## Answer:

## Q9. What is the output of the following program?

```java
public class Outer
{
    private static int data = 10;
    private static int LocalClass()
    {
        class Inner
        {
            public int data = 20;
            private int getData()
            {
                return data;
            }
        };
        Inner inner = new Inner();
        return inner.getData();
    }

    public static void main(String[] args)
    {
        System.out.println(data * LocalClass());
    }
}
```

**Answer:**

200

## Q10 Given an integer array nums, find three numbers whose product is maximum and return the maximum product.

Example 1:

```
Input: nums = [1,2,3]
Output: 6

Example 2:
Input: nums = [1,2,3,4]
Output: 24

Example 3:
Input: nums = [-1,-2,-3]
Output: -6
```

```
Constraints:
    •  3 <= nums.length <= 104
    •  -1000 <= nums[i] <= 1000
```

## Answer:

## Q11. What will be the output of the following code ?

```
var X = { geeks : 1};
var Output = (function() {
    return X.geeks;
    delete X.geeks;
})();

console.log(output);
```

## Answer:
0

## Q12 What will be the output of the following code ?

```
var output = (function(x) {

    delete x;

    return x;

})(-10);
```

```
document.write(output);
```

## Answer:

-10

## Q13 Difference between "var" and "let" Keywords?

## Answer: var is single legacy code and let is

## Q14 Difference between "==" and "===" ?

## Answer: "==" is assign the value for variable

"===" is comper to data type

## Q15 What is javascript Hoisting ?

## Answer: var =10

A = document.getelementById("dem")
A.innerHtml = var

## Q16  Write an SQL query to print details of the Workers whose SALARY lies not between 100000 and 500000.

## Answer: select firstname,lastname form workers where salary NOT BETWEEN 100000 AND 500000

## Q17 Write an SQL query to show 10 records which have lower salary values than others

## Answer: SELECT MIN(SALARY) (SELECT * FORM WORKER)WHERE <10

## Q18

There is a table courses with columns: student and class
Please list out all classes which have less than 5
students.
For example, the table:
+---------+------------+

```
| student | class     |
+---------+-----------+
| A       | Math      |
| B       | English   |
| C       | Math      |
| D       | Biology   |
| E       | Math      |
| F       | Computer  |
| G       | Math      |
| H       | Math      |
| I       | Math      |
+---------+-----------+

Should output:
+---------+
| class   |
+---------+
| English |
| Biology |
| Computer|
```

## Answer:

## Q19 Write a Inner join query that matches items_id of Table_1 and Table_2.

Select column from table_1 INNER JOIN Table_1 on Table_2

**Answer:**

**Q20 Given two tables created and populated as follows please write output of below update query.**

```
CREATE TABLE dbo.envelope(id int, user_id int);
CREATE TABLE dbo.docs(id_num int, page_seq int,
doctext varchar(100));

INSERT INTO dbo.envelope VALUES
   (1,1),
   (2,2),
   (3,3);

INSERT INTO dbo.docs(id_num,page_seq) VALUES
   (1,5),
   (2,6),
   (null,0);

UPDATE docs SET doctext=page_seq FROM docs INNER
JOIN envelope ON envelope.id=docs.id_num
```

```
WHERE EXISTS (
  SELECT 1 FROM dbo.docs
  WHERE id=envelope.id
);
```

**Answer:**