There will be around 50 Questions; Following are some sections in which these questions are divided.

- 1 Coding question
- Linux Commands
- Python Scripting
- DBMS
- Networking
- Output Based

Q1. An Intermediate Sequence of 10 push and 10 pop operations are performed on a stack. the pushes push the numbers 0 through 9 and the pop prints the return value . which of the following output sequence cannot occur with respect to the given scenario ?

A) 0 2 1 3 7 6 5 8 4 9
B) 5 4 3 2 1 0 6 7 8 9
C) 0 2 1 8 9 7 6 5 4 3
D) 1 3 0 2 4 7 6 5 8 9

Q2. What is the output of the following ?

A) <class 'set'>
B) <class 'list'>
C) <class 'int'>
D) <class 'float'>

Q3. An IT company uses a compression technique to encode the original message before transmitting in network. the message contains the following characters wit their occurrency.

character	:	a	e	i	o	u	s	t
occurancy	:	7	9	15	25	13	5	12

if the compression technique using is huffman coding,then how many bits are to be sent in the message ?

A) a = 0111 , e = 010 , i = 00 , o = 11 , u = 101 , s = 0110, t = 100
B) a = 0101 , e = 100 , i = 00 , o = 11 , u = 101 , s = 0110, t = 1001
C) a = 001 , e = 100 , i = 100 , o = 11 , u = 101 , s = 10, t = 10
D) S1 but not S2

Q4. What is the output of the following code ?

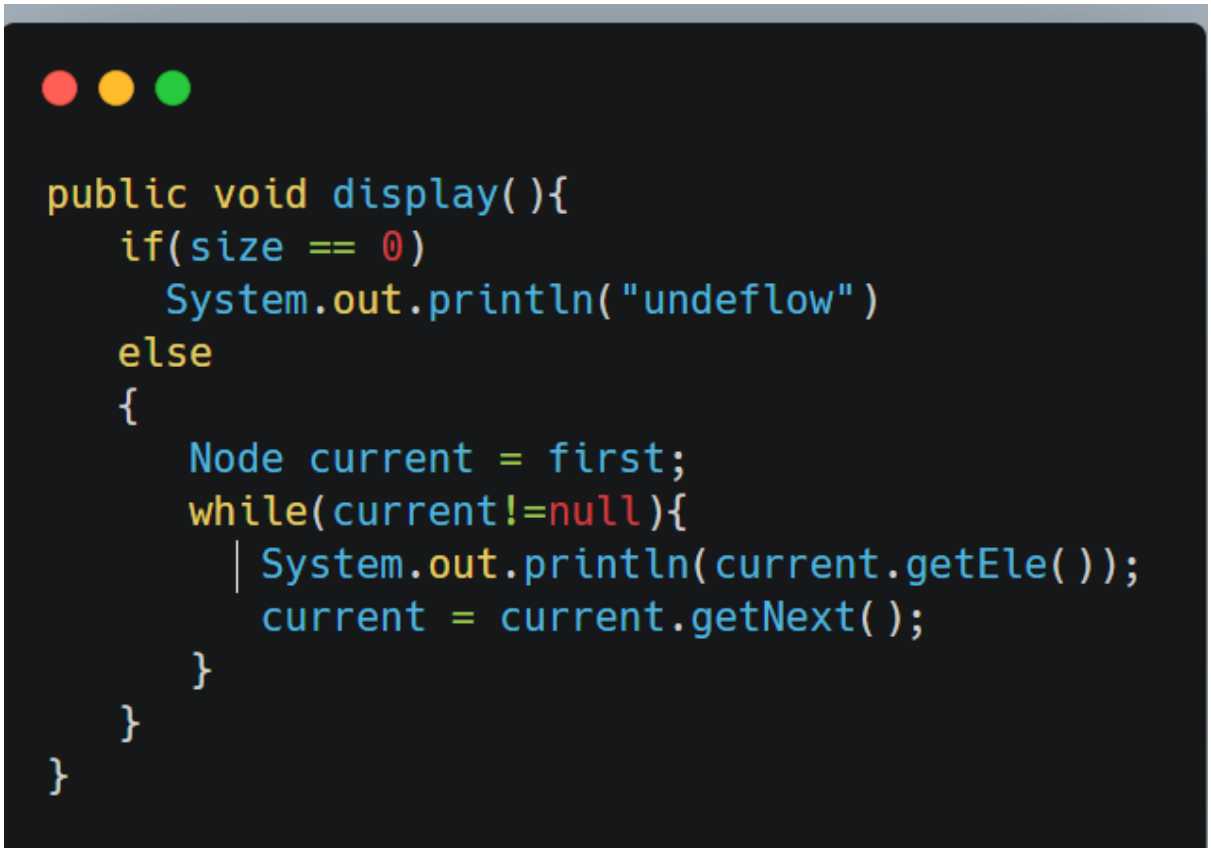
```
tuple1 = (12,45,67.6,34.34)
tuple2 = ("a","b","c")

try:
   if len(tuple1) and len(tuple2) and tuple1[3]:
       final = tuple1+tuple2
except IndexError:
       print("Index out of range")
except TypeError:
       print("TypeError Occurred")
except:
       print("Unable to Concatenate")
else:
       print(final)
```

A) {12,45,67.6,34.34,'a','b','c'}
B) Index out of range
C) TypeError Occurred
D) Unable to concatenate

Q5.consider an array x[5][5][5] and x[3][2][1] = 45. the most common way to print 45 is
print("%d", x[3][2][1]);
which of the option will result the same output ?

A) printf("%d",*(*(*(x + 3) + 2) + 1)
B) printf("%d",*(((*x + 3) + 2) + 1)
C) printf("%d",*(((x + 3) + 2) + 1)
D) printf("%d",***((x + 3) + 2) + 1)

Q6. What is the output ?



```
public void display(){
    if(size == 0)
      System.out.println("undeflow")
    else
    {
        Node current = first;
        while(current!=null){
          System.out.println(current.getEle());
          current = current.getNext();
        }
    }
}
```

A) display the list
B) reverse the list excluding top of the stack element
C) display the list excluding top-of-the stack element

Q7. In a company, 7 Objects are given with their profit and weight, find out the total profit using knapsack problem using given data.

Object :	A	B	C	D	E	F	G
Profilt :	25	75	15	95	80	40	35
Weight :	4	12	2	18	15	6	5

consider the knapsack size M = 48

A) 290.1
B) 291.11
C) 292.11
D) 16

Q8 . A car manufacturing company was making some cars with the given software :

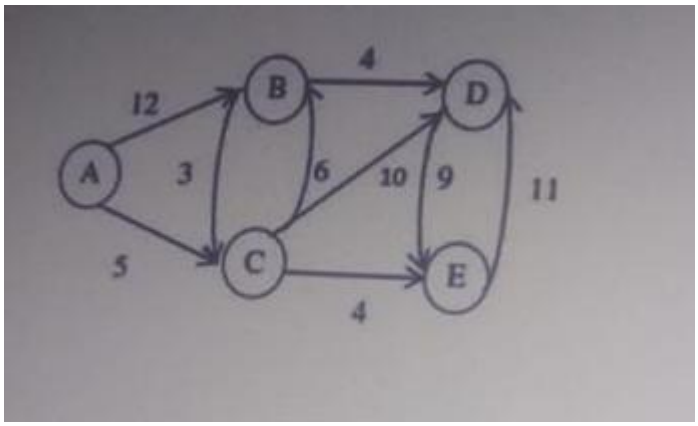
```
from collections import namedtuple
car = namedtuple('Car','name color engine_type')

cars = []

names = ['scorpio','i10','creta']
color = ['black','white','silver']
engine_types = ['diesel','petrol','petrol']

for i in zip(names , color , engine_types):
  newcar = car(name =i[0],color = i[1],engine_type = i[2])
  cars.append(newcar)
```

one of the mechanics mishandled the software and the given input :

1) print('{} colored {} is designed with {} engine type
'.format(cars[0][1],cars[2][0],cars[1][2])
which of the following options will be designed with mechanic's input ?

A) black colored creta is designed with petrol engine type
B) i10 colored diesel is designed with silver engine type
C) white colored i10 is designed with petrol engine type
D) black colored scorpio is designed with diesel engine type

Q9) consider the following graph , using dijkstra algorithm to find single source shortest path from any source to vertex A. find the dijsktra order ?



A) A,C,B,E,D
B) A,C,B,D,E
C) A,B,E,C,D
D) A,C,E,B,D

Q10) Find the output of the following programme :

```
class node {
   int key;
    node left = null, right = null;
    node(int key){
       this.key = key;
    }
}

class main{
   public static int height(node root){
      if(root == null) return  0;
      return 1 + Math.max(height(root.left),height(root.right));
   }

   public static void main(String [] args){
       node root = null;
       root = new node(15);
       root.left = new node(10);
       root.right = new node(20);
       root.left.left = new node(8);
       root.left.right = new node(12);
       root.right.left = new node(16);
       root.right.right = new node(25);

       System.out.print(height(root));

   }
}
```

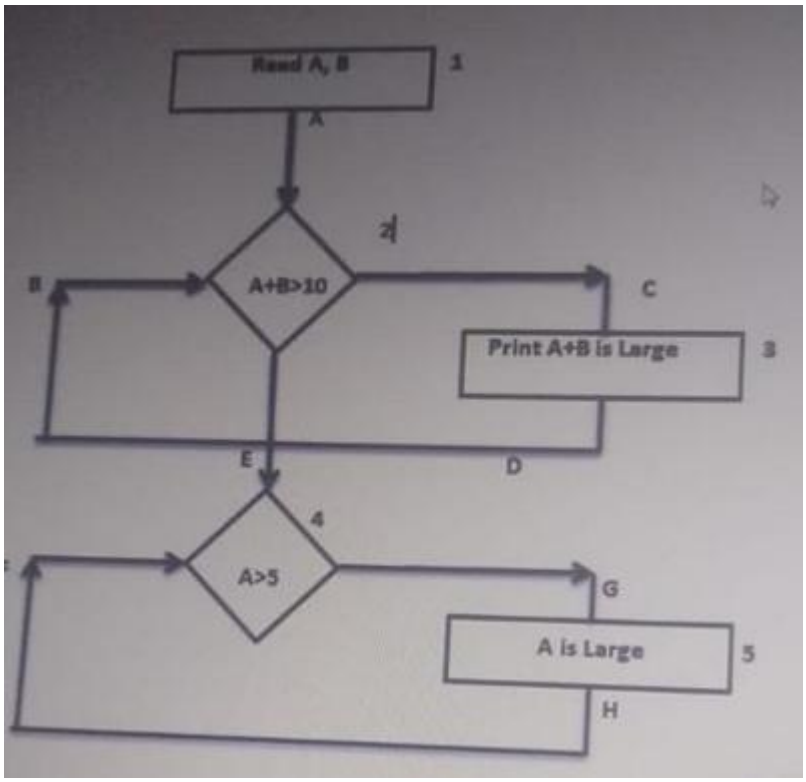
A) 2
B) 3
C) 4
D) 5

Q11) identify the output of the following code :

```
 #! /usr/bin/awk       !
BEGIN
{
  two = 2 ;
  two :
  print two
}
```

A) 3
B) 2
C) Two
D) Three

Q12) represent the following diagram in code format :



A) Read A

```
Read B
IF A +  B  => 10 THEN
Print(“A+B is large”)
ENDIF
IF A<=5 THEN
PRINT “A Large”
ENDIF
```

B)
```
Read A
Read B
Read C
Read D
IF A +  B  !> 10 THEN
Do not Print(“A+B is large”)
ENDIF
IF A !> 5 THEN
Do not PRINT “A Large”
ENDIF
```

C)
```
Read A
Read B
IF A +  B  < 10 THEN
Print(“A+B is large”)
ENDIF
IF A<5 THEN
PRINT “A Large”
ENDIF
```

D)
```
Read A
Read B
IF A +  B  > 10 THEN
Print(“A+B is large”)
ENDIF
IF A > 5 THEN
PRINT “A Large”
ENDIF
```