Name of the Course : B.Sc APS   Semester   : III

Name of the Paper   : Python Programming for Data Handling   Faculty Name   :Abha Vasal

Duration : 1 Hour   Maximum Marks: 20

Date of Test : 3.10.2023   **SET A**

Q1 Write single line commands to perform the following :   (3)
• Remove element sequence A[3:6] from list with 10 elements
• Make the 1st alphabet of all the words in capital
• delete element from a list

Q2 Write a program to check if number is a palindrome for a number entered by user   (3)

Q3 Write a program that takes a list as input and returns a list in which every element is the factorial of element of input list   (4)

Q4 Write statements for   (3)

(a) set union

(b) concatenating two lists

(c) methods to count number of occurrences of a particular element

Q5 What will be the output of following. Show step by step evaluations   (4)

a. 15 + 6 * 2 ** 3 != 12// 3 -4 and 29 >= 29/ 9
b. 13//3*4**2-12
c. A= [1,2,4,5,6,7,8,9,10, 13, 14,15, 17]
```
    for i in range(0, len(A)) :
        if (A[i] %2 ==0):
            A[i] = 5 *i
        elif (A[i] % 3==0):
            A[i]= 6 *2
        else:
            A[i] *=2
    print(A)
```

d. N=5
```
    Sum=0
    for i in range(1,N):
        for j in range( N,i):
            Sum= Sum + i *j
    print(Sum)
```

Q6 Write a program to read a string from user. Create a new string from the input string in which all elements at even position are replaced with "$$' .   (3)

Faculty Signature

Name of the Course : B.Sc APS   Semester   : III

Name of the Paper   : Python Programming for Data Handling   Faculty Name   :Abha Vasal

Duration : 1 Hour   Maximum Marks: 20

Date of Test : 3.10.2023   **SET B**

Q1 Name the functions to perform the following :   (4)

• Checks if all characters in a string are either alphabets or digits
• Checks if all characters in a string are in lower case
• all occurrences of 'a' becomes '**' in a string
•   Set operation to find elements that are exclusive to one set

Q2 Write a Python program to count number of words in a string entered by the user. There can be more than one space between the words.   (3)

What will be the output of the following code: Show step wise execution

```
i = 1
while True:
    if i%2 == 0:
        break
    print( i )
    i += 2
```

Q3 Using list comprehensions Create a list of all the consonants in the string "Yellow Yaks like yelling and yawning and yesterday they yodeled while eating yucky yams".   (2)

Q4 Differentiate between   (3)
(a) while and for loop   (b)   sets and list

Q5 What will be the output of following. Show step by step evaluations   (5)

   a. math.ceil(12.33)
   b. 10 + 6 * 2 ** 2 !=9 // 4 -3 and 29 >= 29/ 9
   c.   10 | 15
   d. A= [1,2,4,6,9,10, 14, 15, 17]

```
for i in range(0, len(A)) :
    if (A[i] %2 ==0):
        A[i] = 5 *i
    elif (A[i] % 3==0):
        A[i]= 6 *2
    else:
        A[i] *=2

print(A)
```

   e. N=5
```
Sum=0
for i in range(1,N):
    for j in range( i, N):
        Sum= Sum + i+j
print(Sum)
```

Q6 Write a program to find LCM of 2 numbers. (3)

Faculty Signature

Name of the Course   : B.Sc APS   Semester   : III

Name of the Paper   : Python Programming for Data Handling   Faculty Name   :Abha Vasal

Duration : 1 Hour   Maximum Marks: 20

Date of Test : 3.10.2023   **SET C**

1 Write a for corresponding to the while loop given Sum =0   (2)
I =10
while I >0:
 Sum = Sum + I
 I = I-5
print(Sum)

Q2 a)Using List comprehension Find all of the numbers from 1-1000 that are divisible by 5

What will be the output of the following code: Show step wise execution   (3+2)

b) i = 2
   while i <20:
       if i%2 == 1:
          print(i)
       i += 2

Q3 Write python code to remove all elements from odd position from a given L   (3)

Q4 What will be the output of the following. Show step by step evaluations   (3)
i. 15 + 6 // 3 ** 3 !=9 // 3 -3 and 29 >= 29/ 9
ii. 17//3*5**2 + 3*7
iii. A= [1,21,3,4,5,6,7,8,9,10, 13, 15,18]
     for i in range(0, len(A)) :
       if (A[i] %2 ==0):
            A[i] = 5 *i   iv.   N=5
       elif (A[i] % 3==0):   Sum=0
            A[i]= 6 *2   for i in range(N, 1):
       else: for j in range(N, i):
            A[i] *=2   Sum= Sum + i + j
     print(A)   print(Sum)

Q5 Perform the following   (3)
 (a) 33 | 22   (b) 19 & 11
Q6 Write a program to read a string from user. The program should check that the length of the string is atleast 6 and contains atleast one character in upper case, one character in lower case one digit and one symbol from the list [!,@,#,$,%,&*~]. If any of the criteria is not fulfilled print 'Not a valid string'   (4)

Faculty Signature

Faculty Signature: