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TEST-2 EXAMINATION- October, 2019

B. Tech III Semester

COURSE CODE: 18B11CI314

MAX. MARKS: 25

COURSE NAME: PYTHON PROGRAMMING ESSENTIALS

COURSE CREDITS: 4

MAX. TIME: 1 Hr and 30 Min

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1.

a) The inputs `d` and `lst` to function `mystery` below are, respectively, a dictionary and a list.

(Co-3)[2*2 marks]

```
def mystery(d,lst):
```

```
    s = 0
```

```
    for k,v in d.items():
```

```
        if k in lst:
```

```
            s = s + d[k]
```

```
    return s
```

Suppose that we execute the following commands in the given order. What does the function call return?

```
>>> myd = {"x":10, "y": 15, "z":20, "w": 5}
```

```
>>> mylst = ["x","w"]
```

```
>>> mystery(myd,mylst)
```

b) Write a Python script to print a dictionary where the keys are numbers between 1 and 15 (both included) and the values are square of keys.

Sample Dictionary: {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100, 11: 121, 12: 144, 13: 169, 14: 196, 15: 225}

Q2. Write a function in Python that takes a string consisting of alphabetic characters as input argument and returns the most common character. Ignore white spaces i.e. do not count any white space as a character. Note that capitalization does not matter here i.e. a lower case character is equal to an upper case character. In case of a tie between certain characters return the last character that has the largest count.

For example, if the string is "work hard", the most common character is 'r' which is appearing two times as compared to all other characters occurring only once. If the string is "better", the largest count is 2 for both characters 'e' and 't'. Since 't' appears after 'e' in the given string, the function should return 't' as the most common character. **(CO-2) [4 marks]**

Q3.

a) How we handle exceptions in python? Explain with suitable example? Explain any four built-in exceptions defined in python. **(CO-4)[3 marks]**

b) What is the output of following code: **(CO-1)[1*2 marks]**

- i. `print(chr(ord('A')))`
- ii. `print '{0:.2}'.format(1.0 / 3)`

Q4. Given a string s, recursively remove adjacent duplicate characters from the string s. The output string should not have any adjacent duplicates. **(CO-2) [4 marks]**

Input:

The first line of input contains an integer T, denoting the no of test cases. Then T test cases follow. Each test case contains a string str.

Output:

For each test case, print a new line containing the resulting string.

Constraints:

$1 \leq T \leq 100$

$1 \leq \text{Length of string} \leq 50$

Example:

Input:

2

azxxzy

acaaabbbacdddd

Output:

ay

acac

Q5. How do we create a file in Python? What is a file object in Python? Write a program to read a text file in Python and print number of lines and number of unique words. **(CO-4) [4 marks]**

Q6. Explain the concept of classes and objects using an example in Python. Write a python program to count the number of objects of the class. **(CO-5)[4 marks]**

*****Best of Luck*****