Shelendra Shukla

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T3 EXAMINATION- December 2018

COURSE NAME: PYTHON PROG. MAX. MARKS: 35
COURSE CODE: 18B1WCI731
COURSE CREDITS: 3 MAX. TIME: 2 Hr

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

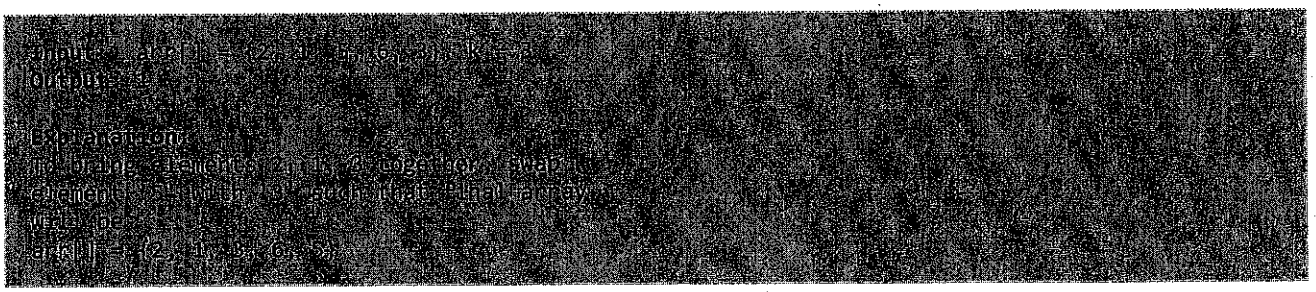
Question 1:

Write short notes with example on: **[1.5 x 10 Marks]**

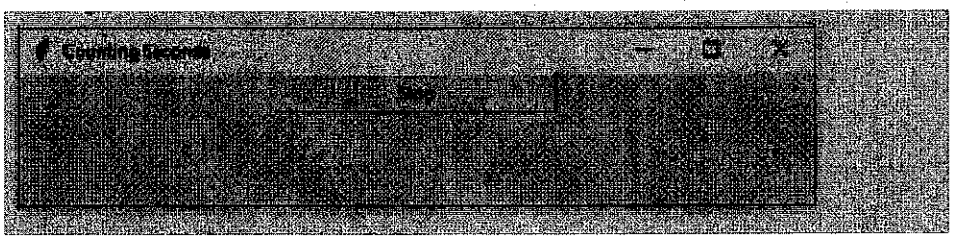
a) Mention five benefits of using Python?
b) What is *regular expression, explain re.match function*?
c) What is lambda in Python?
d) Whenever Python exits, why isn't all the memory de-allocated?
e) Write any two methods along with syntax to generate a random numbers in Python?
f) What are the built-in type does python provides?
g) Is it possible to use negative indexes?
h) What is the process of compilation and linking in python?
i) How you can convert a number to a string?
j) How are arguments passed by value or by reference?

Question 2: **[5 Marks]**

Given an array of n positive integers and a number **k**. Find the **minimum** number of swaps required to bring all the numbers less than or equal to **k** together.



Question 3: Write the python code (use tkinter) to implement the given GUI **[5 Marks]**



Question 4: **[5 Marks]**

Given a singly linked list and a key, count number of occurrences of given key in linked list. For example, if given linked list is 1->2->1->2->1->3->1 and given key is 1, then output should be 4. [Don't use recursion]

Question 5: **[5 Marks]**

Suppose two lists X and Y are given, write a python program to:

a) Merge / Join lists.
b) Remove multiple elements from the list [e.g remove all the numbers from list, which are multiple of 3].
c) Check if an item exists in list? | Search by Value or by Condition.