

**National University**

**of Computer & Emerging Sciences Peshawar Campus**



Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Program: BSCS

Semester: SPRING – 2018

Time Allowed: 1: 00 hour

Course: CS101 (Introduction to Computing)

Examination: Sessional I

Total Marks: 25 Weightage: 15%

Date: 19/2/2018

Instructor: Shakir Ullah Shah

**NOTE:** Attempt all questions. In case of an ambiguity in a question, make an assumption, write your assumption and carry on with the question.

1. In the following code there are two NameError. Try to locate and correct it: [3]

def fizzbuzz(number):

output = str(number)

if number % 3 == 0:

putput = "fizz"

return output

print fizzuzz(2)

solution:

**def** fizzbuzz(number):

output = str(number)

**if** number % 3 == 0:

output = number,**“is Divisible by 3”**

**return** output

**print** fizzbuzz(2)

1. What will be the output of the following:[2+3]

x---1

def newLine():

print '|'+'+'\*5+'|'

def threeLines():

newLine()

newLine()

newLine()

print "First Line."

threeLines()

print "Second Line."

Solution:

First Line.

|.....|

|.....|

|.....|

Second Line.

2.3

1 None

2 None

3 None

4 None

5 (3, 2, 1)

6 (3, 2, 1)

1. Declare a variable ‘dollars’ and ‘cents’ and assign them 50 and 30 respectively, then show the output like I have $50.30 [3]

Solution:

dollars=50

cents=30

print “I have $”+str(dollars)+”.”+str(cents)

1. Write a function ‘isDivisible’ that takes two arguments. isDivisible returns either True or False to indicate whether the first parameter is or is not divisible by second parameter. [6]

Solution:

**def** isDivisible(x, y):

**return** x % y == 0

x=6

y=4

**if** isDivisible(x,y):

**print** x,**'is divisible by'**,y

**else**:

**print** x, **'is not divisible by'**, y

1. Write a function ‘distance’ to find the distance between two points, given by the coordinates (x 1 , y 1 ) and (x 2 , y 2 ). By the Pythagorean theorem, the distance is:

from math import sqrt

def distance(x1, y1, x2, y2):

dx = x2 - x1

dy = y2 - y1

dsquared = dx\*\*2 + dy\*\*2

result = sqrt(dsquared)

return result

or

from math import sqrt

def distance(x1, y1, x2, y2):

return sqrt((x2 - x1)\*\*2 + (y2 - y1)\*\*2)

or

def distance(x1, y1, x2, y2):

return ((x2 - x1)\*\*2 + (y2 – y1)\*\*2)\*\*0.5