**CS 3160 Concepts of Programming Languages**

**Fall 2018 Assignment 5**

**Due 11-07-2018**

1. Does exception have to be part of the type system of a language?

(a) yes (b) no

2. Select all that applies. For a language to support exception, it must support

(a) an operation to raise an exception

(b) an operation to handle an exception

(c) categorization of different exception types

(d) categorization of exception handlers

3. For each of the following fragments of code, write what the output would be. Try to do this without running the code (you can check yourself when you’re done).

1. count = 0

for letter in "Snow!":

print( "Letter #", count, "is", letter)

count += 1

1. num = 10

while True:

if num < 7:

break

print(num)

num -= 1

4. With a given integral number n, write a program to generate a dictionary that contains (n: n\*n\*n) where key is n and value is n\*n\*n for all values from 1 to n. Display your dictionary.

Suppose if input given is n = 5 then output should be {1: 1, 2: 8, 3: 27, 4: 64, 5: 125}

5. Write a static method named **is\_workingday()** to our Employee class (that we wrote in the class while discussing Encapsulation) to accept a date in the format (year,month,date) as an argument and return True(if working day) or False (Sunday/Saturday). User provides a date as an argument to this method. Please write the entire class **Employee** with class variable (num\_of\_emp), instance variables (fname,lname,eid), regular methods (displayname), class method(disp\_no\_of\_emps), static method (is\_workingday). Create 3 employee objects and display all results by calling all methods.

6. Create a **point** class and add a method to overload > operator. Check if one point is greater than other. For example. **point**(1,1) > **point**(-2,-3) displays False.

(Hint: To compare, find magnitude of each point using formula x2+ y2 )