PYTHON – WORKSHEET 1

Q1 to Q8 have only one correct answer. Choose the correct option to answer your question.

1. Which of the following operators is used to calculate remainder in a division? A) # B) & C) % D) $

Ans : **C**

2. In python 2//3 is equal to? A) 0.666 B) 0 C) 1 D) 0.67 3. In python

Ans : **B**

3.In python, 6<<2 is equal to? A)36 B) 10 C) 24 D) 45

Ans : **C**

4. In python, 6&2 will give which of the following as output?

A) 2 B) True C) False D) 0

Ans : A

5. In python, 6|2 will give which of the following as output?

A) 2 B) 4 C) 0 D) 6

Ans : **D**

6. What does the finally keyword denotes in python? A) It is used to mark the end of the code B) It encloses the lines of code which will be executed if any error occurs while executing the lines of code in the try block. C) the finally block will be executed no matter if the try block raises an error or not. D) None of the above

Ans : **C**

7. What does raise keyword is used for in python? A) It is used to raise an exception. B) It is used to define lambda function C) it's not a keyword in python. D) None of the above

Ans : **A**

8. Which of the following is a common use case of yield keyword in python? A) in defining an iterator B) while defining a lambda function C) in defining a generator D) in for loop.

Ans : **C**

9. Which of the following are the valid variable names? A) _abc B) 1abc C) abc2 D) None of the above

Ans : **D**

10. Which of the following are the keywords in python? A) yield B) raise C) look-in D) all of the above

Ans : **D**

11. Write a python program to find the factorial of a number.

Ans : def factorial(n): # Initialize the factorial result to 1 factorial_result = 1

Iterate from 1 to n (inclusive) for i in range(1, n + 1): factorial_result *= i return factorial_result

Example usage: number = 5

Change this number to calculate factorial for a different number result = factorial(number) print(f"The factorial of {number} is: {result}")

12. Write a python program to find whether a number is prime or composite.

Ans : import math def is_prime(num):

Special case for numbers less than or equal to 1 if num <= 1: return False # Check divisibility from 2 to sqrt(num) sqrt_num = int(math.sqrt(num)) for i in range(2, sqrt_num + 1): if num % i == 0: return False return True

Example usage: number = 17

Change this number to check for a different number if is_prime(number): print(f"{number} is a prime number.")

else: print(f"{number} is a composite number.")

13. Write a python program to check whether a given string is palindrome or not.

Ans : def is_palindrome(s):

Remove spaces and convert to lowercase s = s.replace(" ", "").lower() # Compare string with its reverse return s == s[::-1]

Example usage: input_string = "A man a plan a canal Panama"

Change this string to test different cases if is_palindrome(input_string): print(f"'{input_string}' is a palindrome.")

else: print(f"'{input_string}' is not a palindrome.")

14. Write a Python program to get the third side of right-angled triangle from two given sides.

Ans : import math def calculate_hypotenuse(a, b):

Calculate the square of each side a_squared = a ** 2 b_squared = b ** 2

Calculate the square root of the sum of squares c = math.sqrt(a_squared + b_squared) return c

Example usage: side1 = 3 side2 = 4 hypotenuse = calculate_hypotenuse(side1, side2) print(f"The length of the hypotenuse of the right-angled triangle with sides {side1} and {side2} is: {hypotenuse}")

15. Write a python program to print the frequency of each of the characters present in a given string

Ans : def print_char_frequency(input_string):

Initialize an empty dictionary to store character frequencies char_frequency = {} # Count frequency of each character in the input string for char in input_string: if char in char_frequency: char_frequency[char] += 1 else: char_frequency[char] = 1

Print the frequency of each character for char, freq in char_frequency.items(): print(f"Character '{char}' occurs {freq} time(s)")

Example usage: input_string = "hello world" print_char_frequency(input_string).