**ECSE 103L Tutorial 3:**

|  |  |
| --- | --- |
| Ques 1. What will be the output of the following program?  people = 30  cars = 40  trucks = 15  if cars > people:  print ("We should take the cars.")  elif cars < people:  print ("We should not take the cars.")  else:  print ("We can't decide.")  if trucks > cars:  print ("That's too many trucks.")  elif trucks < cars:  print ("Maybe we could take the trucks.")  else:  print ("We still can't decide.")  if people > trucks:  print ("Alright, let's just take the trucks.")  else:  print ("Fine, let's stay home then.")  **Output:**  We should take the cars. Maybe we could take the trucks. Alright, let's just take the trucks.    Q.2. What will be the output of the following program?    value1= -10  if (value1):  print("1 - Got a true expression value", value1)  else:  print("1 - Got a false expression value", value1)    value2= 0  if (value2):  print("2 - Got a true expression value", value2)  else:  print("2 - Got a false expression value", value2)    value3= 1000  if (value3):  print("3 - Got a true expression value", value3)  else:  print("3 - Got a false expression value", value3)  **Output:**  1 - Got a true expression value -10 2 - Got a false expression value 0 3 - Got a true expression value 1000 | Ques 3. What will be the output of the following program?  i=0  while i<9:  if (i%3==0):  print(i)  i=i+1  print('Loop completed')  **Output:**  0  3  6  Loop completed  Ques 4. What will be the output of the following program?  i,sum=0,0  while i>90:  if i%10==0:  sum=sum+i  i=i+5  print('Sum =', sum)  **Output:**  Sum = 0  Ques 5. What will be the output of the following program?  z,w=10,-10  while(z<50):  if (z>0 or w<0):  print(z\*\*2, w\*\*3)  z = z+10  w=w+10  **Output:**  100 -1000  400 0  900 1000  1600 8000  Ques 6. What will be the output of the following program?  z,w=10,-10  while(z<50):  if (z>0 or w<0):  print(z\*\*2, w\*\*3)  z = z+10  w=w+10  **Output:**  100 -1000  400 0  900 1000  1600 8000  Ques 7. What will be the output of the following program?  x=int(input('enter first number'))  y=int(input('enter first number'))  while(y):  x, y = y, x % y  print(x)  **output:**  enter first number45  enter first number15  15  enter first number21  enter first number9  3  ## try following input x=45, y=15 and x=21, y=9 |

Question 8. Write a program in Python to find the sum of the series x+x3+x5+x7+….xn.

# Progra for sum of series

x=int(input("Enter the value of X"))

n=int(input("Enyter the value of n"))

while(i<=n):

sum=sum+x\*n

i=i+1

print("Sum = ",sum)

**output:**

Enter the value of X5

Enyter the value of n10

Sum = 3007605000

Question 9. Write a program in Python to calculate the double factorial of a number.

For even N it is calculated as

N!!=N(N-2)\*(N-4)\*…..\*2

For odd number it is calculated as:

N!!=N\*(N-2)\*(N-4)\*….\*1

#double factorial

i=int(input("Enter the number"))

fact=1

if(i%2==0):

while(i>=2):

fact=fact\*i

i=i-2

print(fact)

else:

while(i>=1):

fact=factt\*i

i=i-2

print(fact)

**output:**

Enter the number10

3840