Test A II - UAI 735I

## Exam – written part – winter 2019/20

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| Name of student |  |
| Date |  |

# 1 What is output 2 points

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| --- |
| >>> def abc(x,y):  try:  print(x/y)  except ZeroDivisionError:  print("Wrong ",end="")  finally:  print("Cheers ",end="") |
| >>>abc(0)  >>>abc(10,0) |

|  |
| --- |
| >>> def abc(x,y):  try:  print(int(x,16)/int(y,16))  except TypeError:  print("Wrong ",end="")  finally:  print("Cheers ",end="") |
| >>>abc(‘20’,0)  >>>abc(10) |

# 2 Answer 1 point

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| --- |
| What is not a core data structure in Python?  -list  -module  -dictionary  -tuple |
|  |

# 3 What is result 1 point

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| --- |
| >>> y=lambda x: x\*4  >>> import math |
| >>> print(int(y(math.pi))) |

# 4 What is output 2 points

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| --- |
| >>> a = 13  >>> all(a % i for i in range(2, a)) |
| >>> |
| Describe shortly the meaning of this built-in function “all” |

|  |
| --- |
| >>> a = 13  >>> any(a % i for i in range(2, a)) |
| >>> |
| Describe shortly the meaning of this built-in function “any” |

# 5 What are outputs and types 2 points

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| --- |
| def abc(\*x,y=[6,8,9,7,8,3,12,9]):  return [i-j if i>j else j-i for i,j in zip(x,y)] |
| print(abc(1,5,8,9,6,12,7,5)) #what is output |

# 6 What is output 3 points

|  |
| --- |
| >>> m = [{1:{1:{1,2,3}},2:{9,8,0}}] |
| >>> type(m) |
| >>> type(m[0]) |
| >>> type(m[0][1]) |
| >>> type(m[0][1][1]) |
| >>> type(m[0][1][1][1]) |
| >>> len(m) |
| >>> len(m[0][1][1]) |

# 7 What is result 3 points

|  |
| --- |
| >>> list\_of\_elements ={'0': 0, '1': 1,'2': 2,'3': 3,'4': 4,'5': 5,'6': 6,'7': 7,'8': 8,'9': 9, 'A': 10, 'B': 11, 'C': 12, 'D': 13, 'E': 14, 'F': 15, 'G': 16, 'H': 17, 'I': 18,'J': 19, 'K': 20,'L': 21,'M': 22,'N': 23,'O': 24,'P': 25,'Q': 26,'R': 27,'S': 28,'T': 29,'U': 30,'V': 31,'W': 32,'X': 33,'Y': 34,'Z': 35} |
| >>> l={k.lower():v  for k,v in list\_of\_elements.items() if k > 5 and k.isdigit()}  >>> print(l) # print all |

# 8 What is output 3 points

|  |
| --- |
| >>> x = ["Yesterday","Today","Tomorrow","Day after tomorrow"]  >>> b = [(i,j) for i, j in enumerate(x,start=5)] |
| >>> print(b[3])  >>> type(b[3]) |

|  |
| --- |
| >>> x = ["Yesterday","Today","Tomorrow","Day after tomorrow"]  >>> b = {I:j for i, j in enumerate(x,start=5)} |
| >>> print(b[3])  >>> type(b[3]) |

# 9 Named tuple 1 point

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| --- |
| >>> from collections import namedtuple  >>> singer = namedtuple("singer",["voice","music","country"])  >>> Bocelli=singer("baryton","opera","Italy")  >>> Gott=singer("tenor","popmusic","Czechia")  >>> Madonna=singer("sopran","popmusic","USA")  >>> |
| >>> Gott.country # what is output |

# 10. Arguments of function 2 points

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| --- |
| def userFunc(d, b, a = -2, e=1, c=0):  return a+b+c+d+e |
| print(userFunc(5,6)) # what is output? |
| print(userFunc(5,6,7,8,9)) # what is output? |
| print(userFunc(5)) # what is output? |

# 11 What is output i – print all I 2 points

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| --- |
| >>> for i in range(3,9):  if i == 6:  break  print(i) |
|  |
| >>> for i in range(3,9):  if i == 6:  continue  print(i) |
|  |
| >>> for i in range(3,9):  if i == 6:  pass  print(i) |
|  |

# 12 Output 2 points

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| --- |
| >>> items = "Pythagoras honed his skills"  >>> splt = items.split(" ") # (" ") is one space |
| >>> print ("Winter = ", splt[0][:4] + splt[1][1:3] + " + " + splt[3][:3]) # what is output? |

# 13 Imports - print pi (math.pi) in a right way 1 point

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| --- |
| >>> import math |
| >>> |
| >>> import math as m |
| >>> |
| >>> from math import pi |
| >>> |

# 14. Output 3 points

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| --- |
| >>> items = {1:’python’, 2: ‘basics’, 3: ‘examination’} |
| >>> print(items[3][::-1]) # What is output  >>> print(items[3][:-1]) # What is output  >>> print(items[3][-1]) # What is output |
| >>> items = {1:’python’, 2: ‘basics’, 4: ‘examination’,3: ‘javascript’} |
| >>> print(items[3][::-1]) # What is output  >>> print(items[3][:-1]) # What is output  >>> print(items[3][-1]) # What is output |
| >>> items = [(1,'python'), (2,'basics'), (3, 'examination'),(4,'javascript')] |
| >>> print (items[3][::-1]) # what is output  >>> print(items[3][:-1]) # What is output  >>> print(items[3][-1]) # What is output |

# 15 Find errors – what is wrong 3 points

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| --- |
| def abc(s,k,en):  if en:  if s in string.ascii\_letters:  return s\*k  else:  pass  else:  if s in string.digits:    return s-k  print(abc('1234',0) |
| # what is wrong - cannot run (find 5 errors) |

# 16 Write Python program 4 points

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| --- |
| # Write a Python program which with the function abc which from the list of integers e.g.:  # x =[11548,123478,4578’…..]  # will print the list with all numbers which ciferation is 2. |
| # here put the program  def abc(l\_in):  #here put your program    return l\_out  l\_in=[list of numbers]  print(abc(l\_in)) |