Test A II - UAI 655

## Exam – written part – summer 2017

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| Name of student |  |
| Date |  |

# 1 What is output

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| >>> def abc(x):  try:  print(20/x)  except:  print("Wrong ",end="")  finally:  print("Cheers ",end="") |
| >>>abc(0)  >>>abc(10) |

# 2 Answer

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

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

# 4 Draw a simple activity diagram

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| Draw a simple aktivity diagram which will   * Read words from a text file * Decide if the word contains only ascii letters * If yes * Find out the spanish translation in the database * If it is a digit, print it to a screen * Print the pair into output text file |
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# 5 What are outputs and types

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| >>> def call(x,y):  if y < x:  return  return y - x |
| >>> print(call(9,8)) #what is output |
| >>> 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]) |

# 6 What is result

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| --- |
| >>> 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 v > 5 and k.isdigit()}  >>> print(l) # print all |

# 7 Output

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| >>> a="The sixth sick sheikh's sixth sheep's sick"  >>> b=set(a.split("'s ")) |
| >>> print(b) |

# 8 What is output

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| --- |
| >>> x = ["Yesterday","Today","Tomorrow","Day after tomorrow"]  >>> b = [(i,j) for i, j in enumerate(x,start=5)] |
| >>> print(b)  >>> type(b[1]) |

# 9 Edit a small python program

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| Modify the Point class (from Point.py), to support the following operations, where x, y, and r are Points Do not edit the program … only add the methods there:  y = x + r # Point.\_\_add\_\_()  y += x # Point.\_\_iadd\_\_()  y = x - r # Point.\_\_sub\_\_()  …. Present program…..  class Point:  def \_\_init\_\_(self, x=0, y=0):  """A 2D cartesian coordinate  >>> point = Point()  >>> point  Point(0, 0)  """  self.x = x  self.y = y  def distance\_from\_origin(self):  """Returns the distance of the point from the origin  >>> point = Point(3, 4)  >>> point.distance\_from\_origin()  5.0  """  return math.hypot(self.x, self.y)  def \_\_eq\_\_(self, other):  return self.x == other.x and self.y == other.y  def \_\_repr\_\_(self):  return "Point({0.x!r}, {0.y!r})".format(self)  def \_\_str\_\_(self):  return "({0.x!r}, {0.y!r})".format(self) |
| # here put another methods add, iadd, sub |

# 10 Linux command line

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| Now change to your home directory |
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| Create a directory testdir in your home directory |
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| Change rights of the testdir to 555 |
|  |

# 11 Is it wrong or not?

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| while True:  x=input("Enter letter, q for quit: ")  if x.upper() == "Q":  break  else:  print(x) |
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# 12 What is output

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| --- |
| def call(v1=20,v2=5,v3=2):  if v3 > 2:  print(v1\*v2-v3)  else:  print(v3)  call(7,4,1) |
| # what is output |

# 13 What is the difference

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| 1>>> import math as m  2>>> from math import pi |
| # write d = 2 \* pi \* 5 in both cases  1>>>  2>>> |

# 14 What is output

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| --- |
| >>> x="Java Python, Ruby"  >>> x[:11].endswith("n") |
|  |
| >>> x.index("y") |
|  |
| >>> x[::-1].index("y") |
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# 15 What is output

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| --- |
| # Can I ask for the Python version this way?  >>> import sys  >>> print(sys.version) |
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