# Data Structures (Choose 4 from 5 in this group)

1. After creating a pdf file object, a pdf reader object, a page object which command you will use for extracting text from a pdf page?
   1. readText()
   2. extractText()
   3. getText()
   4. None
2. Which of the following will make a list?
   1. [i for i in range(1,5)]
   2. [i for i in range(1,5):1]
   3. [for i in range(1,5)]
   4. None
3. What is the value for K

L = [3, 10, 2, 14, 5, 3, 4]

K = 10 in L

* 1. Index of element 10
  2. Boolean saying if it’s present
  3. Add element 10
  4. None

1. If str1="help us,save us"

str1.find("us")

* 1. It returns the first index position of the first occurrence of "us" in the given string.
  2. It returns the last index position of the last occurrence of "us" in the given string.
  3. It returns the number of times string "us" occurred.
  4. None

1. What is the output of

dict={"Radha":1,"Krishna":3}

dict.update({"Rukmani":3})

print(dict)

* 1. {'Radha': 1, 'Krishna': 3, 'Rukmani': 3}
  2. {'Radha': 1, Rukmani: 3}
  3. {'Radha': 1, 'Krishna': 3}
  4. None

# Controls

1. What is the output of

ls=[-3, 4]

m=map(lambda x:x\*2, ls)

print(m)

* 1. [-6,8]
  2. [-3,4,-3,4]
  3. [9,16]
  4. None

1. What is the output of

import functools

l=list(range(5,10,2))

m=functools.reduce(lambda x,y: x if x<y else y,l)

print(m)

* 1. 10
  2. 9
  3. 5
  4. Address of m

# Analytical/Mathematical

1. import numpy as np

arr = np.array([[1, 2], [4, 9]])

print(np.linalg.det(arr))

* 1. [5,11]
  2. [3,13]
  3. 16.0
  4. 1.0

1. What’s the time complexity for following function:

def my\_function(p):

a = 0

for i in range(2,p\*\*2):

a = a + 1

print(a)

* 1. O(p2)
  2. O(1)
  3. O(p)
  4. O(p2-1)

# Machine Learning

1. When is the Gini index of a data set high?
   1. When homogeneity is minimum
   2. When homogeneity is maximum
   3. It doesn’t depend on homogeneity
   4. None
2. With respect to base models in Ensemble learning, which of the following statements is/are true?
   1. In boosting the base models are parallelly connected to reduce the overall bias of the resulting strong model.
   2. In bagging the base models are sequentially connected to reduce the overall variance of the resulting strong model.
   3. In boosting the base models are sequentially connected to reduce the overall bias of the resulting strong model.
   4. Both a) and b)