Assignment 5

The due date for submitting this assignment has passed.

Due on 2021-02-24, 23:59 IST.

As per our records you have not submitted this assignment.

1) In python, to extract a diagonal or construct a diagonal array, which function is used? ***1 point***

- a. numpy.cumsum()
- b. numpy.trapz()
- c. numpy.diag()
- d. numpy.mod()

No, the answer is incorrect.
Score: 0

Accepted Answers:
c. numpy.diag()

2) For the command numpy.diag(v, k), to extract the diagonals above the main diagonal, the parameter k should be ***1 point***

- a. k=0
- b. k>0
- c. k<0
- d. None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. k>0

3) To compute the (multiplicative) inverse of a matrix in python, which function should be used? ***1 point***

- a. linalg.inv()
- b. linalg.lstsq()
- c. linalg.pinv()
- d. None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. linalg.inv()

4) Which function should be used to generate a compressed Sparse Column matrix in python? ***1 point***

- a. scipy.sparse.bsr_matrix
- b. scipy.sparse.csc_matrix
- c. scipy.sparse.csr_matrix
- d. scipy.sparse.coo_matrix

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. scipy.sparse.csc_matrix

5) In python, to solve the sparse linear system Ax=b, where b may be a vector or a matrix, which function should be used? ***1 point***

- a. scipy.sparse.linalg.spsolve_triangular()
- b. scipy.sparse.linalg.spsolve()
- c. scipy.sparse.linalg.factorized()
- d. None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. scipy.sparse.linalg.spsolve()

6) Which function in python, numerically solves a first order system of ODEs subject to two-point boundary conditions? ***1 point***

- a. scipy.integrate.solve_ivp
- b. scipy.integrate.solve_bvp
- c. scipy.integrate.romb
- d. scipy.integrate.nquad

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. scipy.integrate.solve_bvp

7) The smallest value of the standard Pareto distribution is _____. ***1 point***

- a. 0
- b. 0.5
- c. 1
- d. -1

No, the answer is incorrect.
Score: 0

Accepted Answers:
c. 1

8) In python, which function returns the cumulative sum of the elements along a given axis? ***1 point***

- a. numpy.mod()
- b. numpy.cumsum()
- c. scipy.integrate.cumtrapz()
- d. None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b. numpy.cumsum()

9) Which function in python returns the element-wise remainder of division? ***1 point***

- a. scipy.integrate.cumtrapz()
- b. numpy.cumsum()
- c. numpy.trapz()
- d. numpy.mod()

No, the answer is incorrect.
Score: 0

Accepted Answers:
d. numpy.mod()

10) The function numpy.random.standard_normal, returns samples from a Standard Normal distribution with mean=_____ and standard deviation=_____. ***1 point***

- a. 0 and 1
- b. 1 and 0
- c. 0 and 0.5
- d. 0.5 and 1

No, the answer is incorrect.
Score: 0

Accepted Answers:
a. 0 and 1