

Answer Submitted.

X


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[NPTEL \(https://swayam.gov.in/explorer?ncCode=NPTEL\)](https://swayam.gov.in/explorer?ncCode=NPTEL) » Data Science for Engineers (course)


Course outline

How does an NPTEL online course work?

Setup Guide

Pre Course Material

Week 0

Week 1

Week 2

Week 3

Week 4

Week 5

☐ Multivariate Optimization With Equality Constraints (unit? unit=64&lesson=65)

☐ Multivariate Optimization With Inequality

Week 5: Assignment 5 (Non Graded)

Assignment not submitted

Note : This assignment is only for practice purpose and it will not be counted towards the Final score

1) $f(\bar{x})$ is

1 point

- ☐ Objective function
- ☒ Hessian matrix
- ☐ Constraint
- ☐ Decision variable

No, the answer is incorrect.
Score: 0

Accepted Answers:
Objective function

2) $h(\bar{x}) = 0$ is

1 point

- ☐ Objective function
- ☐ Hessian matrix
- ☒ Equality constraint
- ☐ Inequality constraint

Yes, the answer is correct.
Score: 1

Accepted Answers:
Equality constraint

3) Consider the multivariate function $\min_{x_1, x_2} f(x) = 4x_1^2 + 8x_2^2$ and s. t $4x_1 + 3x_2 - 14 = 0$

1 point

Constraints
(unit?
unit=64&lesson=66)

☒ Introduction to
Data Science
(unit?
unit=64&lesson=67)

☐ Solving Data
Analysis
Problems - A
Guided
Thought
Process (unit?
unit=64&lesson=68)

☐ Dataset (unit?
unit=64&lesson=69)

☐ FAQ (unit?
unit=64&lesson=70)

☐ Week 5
Feedback
Form: Data
Science for
Engineers
(unit?
unit=64&lesson=71)

☐ **Practice:
Week 5:
Assignment 5
(Non Graded)
(assessment?
name=124)**

☒ Quiz: Week 5:
Assignment 5
(assessment?
name=134)

☒ Week 5:
Solutions
(unit?
unit=64&lesson=141)

Week 6

Week 7

Week 8

Text Transcripts

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Books

The values of x_1 , x_2 , and λ from the first order necessary condition are:-

☐

$$x_1 = 2.73, x_2 = 5.46, \lambda = -1.02$$

☐

$$x_1 = 2.73, x_2 = 1.02, \lambda = 5.46$$

☒

$$x_1 = -1.02, x_2 = 2.73, \lambda = -5.46$$

☐

$$x_1 = -1.02, x_2 = -5.46, \lambda = 2.73$$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$$x_1 = 2.73, x_2 = 1.02, \lambda = 5.46$$

4) If the objective function $f(\bar{x})$ is quadratic function and the constraints $h(\bar{x}), g(\bar{x})$ are linear, then the type of optimization problem is **1 point**

☐ Linear programming

☒ Quadratic programming

☐ Non linear programming

☐ Stochastic programming

Yes, the answer is correct.

Score: 1

Accepted Answers:

Quadratic programming

Check Answers and Submit

Your score is: 2/4

