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Unit 6 - Week 4

Practice Assignment 4

The due date for submitting this assignment has passed. Due on 2020-02-26, 23:59 IST.
As per our records you have not submitted this assignment.

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

1) Class of optimization problems **WITH NO** constraints are known as ***1 point***

- constrained optimization problems
- unconstrained optimization problems
- linear constrained optimization problems
- none of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
unconstrained optimization problems

2) The optimum for a function $f(x)$ at x^*, exists if: ***1 point***

- If the first derivative at x^* is zero
- If the first derivative at x^* is positive
- If the first derivative at x^* is negative
- None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
If the first derivative at x^* is zero

3) When the feasibility regions defined by equality constraints and inequality constraints are compared, ***1 point***

- The regions defined by both are exactly the same
- The region defined by the inequality constraint is greater
- The region defined by the equality constraint is greater
- none of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
The region defined by the inequality constraint is greater

4) If $f(x) = 12x^4 - 2x^3 + 9x^2 + 5$, then the first order necessary condition for either maxima or minima of $f(x)$ is ***1 point***

- $24x^2 + 4x - 6 = 0$
- $48x^3 - 6x^2 + 18x = 0$
- $36x^3 - 2x^2 - 6x = 0$
- $48x^2 - 4x - 6 = 0$

No, the answer is incorrect.
Score: 0

Accepted Answers:
$48x^3 - 6x^2 + 18x = 0$

5) The restrictions on the possible values of the solution to the optimization problem are called: ***1 point***

- objective functions
- cost functions
- equality/inequality constraints
- none

No, the answer is incorrect.
Score: 0

Accepted Answers:
equality/inequality constraints