

Unsupervised and Reinforcement Learning Exam

CS-434
Winter 2015/2016
26 January 2016
Time Limit: 120 Minutes

Name: _____
SCIPER: _____

1. Please write your name and SCIPER number on the top right section of the cover page.
2. Please also write your name on the top left header of all the exam pages and on any additional sheets of paper you may wish to include.
3. Please answer the questions in the provided space.
4. Write clearly, in pencil or pen, indicating each time which question you are answering. If you are using additional sheets of paper, please indicate clearly that the answer continues on a separate sheet.
5. You may use a cheat-sheet. It must be hand-written, single sided and max A4 format.
6. You can obtain maximum 100 points. This exam contains 12 pages (including this cover page).

This exam has three sections.

Section 1 contains true or false questions and yields a total of 20 points. In this section, you must select and **only answer 10** out of the 15 given questions. If you answer more, only the first 10 will be considered. For each question, circle only one (either true or false) out of the two options. Each question is worth 2 points.

Section 2 contains open questions about theoretical derivations from the slides and the lectures in class and yields a total of 50 points. Please answer **all** questions in this section in the space provided, *clearly indicating* each time which question you are answering.

Section 3 contains two practical problems, similar to the exercises. You need to solve **only one** of the two problems. One question focuses on unsupervised learning and the other on reinforcement learning. Both are equally difficult and yield the same amount of points (i.e. 30 points).