#### POLITECNICO DI MILANO - SEDE DI COMO

## MODEL IDENTIFICATION AND ADAPTIVE SYSTEMS

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Academic year 2017/18 Final Exam – January 9, 2019

### Answer the following questions:

- 1) Illustrate the self tuning adaptive control method. Explain in particular the certainty equivalence principle.
- 2) Illustrate the narrowband active noise equalizer (ANE) scheme.
- 3) Explain the role of importance sampling in the development of particle filters.
- 4) Describe the main classes of parametric black-box nonlinear models used for identification purposes.

### **Instructions:**

- Report your name and identification number on the top right corner of the first page.
- Use separate pages for answers to different questions (one page for each question).
- Books, course slides, notes are not allowed, as well as the use of communication devices (e.g. smartphones).