Information Management Course - Written Exam - 15/01/2018

First Name _____ Family Name _____ Student ID_____

1) Let us define as "Churn detection" the problem of finding if a customer has an attitude for often changing operator, constantly following special offers. For example, in the context of mobile communications, a churn is a user willing to change his/her mobile operator as soon as a cheaper plan from another operator is found. Churn management is of course an issue for companies. Propose a method to deal with a churn detection problem in terms of (a) data you expect to be required to collect (b) data processing steps (c) main analytical models to be applied (d) validation of results.

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2) Principal Component Analysis and Feature Selection Algorithms: (a) sketch the main aim of these methods (b) compare the relative strong and weak points of them (c) mention a suitable application example for both.

3) Briefly define the concept of "stratified sampling", its aim and its context of application