**Statistics-I. Continuous Evaluation (December 2017)**

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We have the database <http://www.uv.es/mperea/RosenbergScale.sav> that is composed of the following variables: A) Score\_P in Rosenberg’s self-esteem questionnaire; B) Score\_S in Rosenberg’s self-esteem questionnaire; C) Age; D) Gender (man, woman), and E) Smoking (yes, no)

1. In the sample, do men smoke more than women? Or more generally, what is the degree of relationship between Gender (men, women) and Smoking (yes, no)? Justify your answer (Copy/paste the appropriate tables from SPSS)

2. We want to predict Score\_P using a regression equation with IQ, Score\_S, and Age as predictors. A) What is the percentage of variance of IQ that can be explained by the regression equation?; B) Are there any collinearity problems?; and C) Which one is the worst predictor? (Copy/paste the appropriate tables from SPSS)

3. We have been offered to play the following game, in which each time we have to pay 5€. We roll a dice (i.e., a six-sided dice). If there is a “6”, then we receive 25€ and if there is a “5”, we receive 10€, €. Is it worth playing that game in the long run? Justify your answer.

4. A number of educational psychologists assume that readers whose scores are less than 35 in the McMillan-Binet reading test can be categorized as “individuals with dyslexia”. If we assume that this test is normally distributed (mean = 50; standard deviation = 10), what is approximately the percentage of readers with dyslexia in the population?