UNIVERSITA' DEGLI STUDI ROMA TRE
CdS in ***Biomedical Engineering***

class of
Signal Processing for Biomedical Engineering

Written test of January 27th 2016. .
note: This test is valid only for registered students. Test delivery implies that previous results are canceled.

Family and first name (printed): _____ _____

signature: _____

Roma3 registration number: _____ or ID card number: _____

born on (day/month/year): _____ / _____ / _____

In the academic year 2015/2016 registered at the ___ year of the master course in _____

e-mail (write in clear letters): _____ @ _____

Exercises:

1) Let x(nT) be the sequence obtained from sampling with the period T of the analog signal x(t). Perform an **effective** digital processor to obtain at the output the sequence: $y(n) = x(1.5\, n\, T - 0.2\, T)$.

2) Perform a linear FIR filter made of 5 coefficients to neglect both low and high frequency contents for $\omega<\pi/8$ and $\omega>\pi/2$, respectively (being ω the radian normalized frequency).