Neuroengineering 2023-2024
Exam February 3rd, 2025
Part II

How to submit your answers.

The answers can be typed in the provided text file, following the template. Do not modify or move the lines containing the headers.
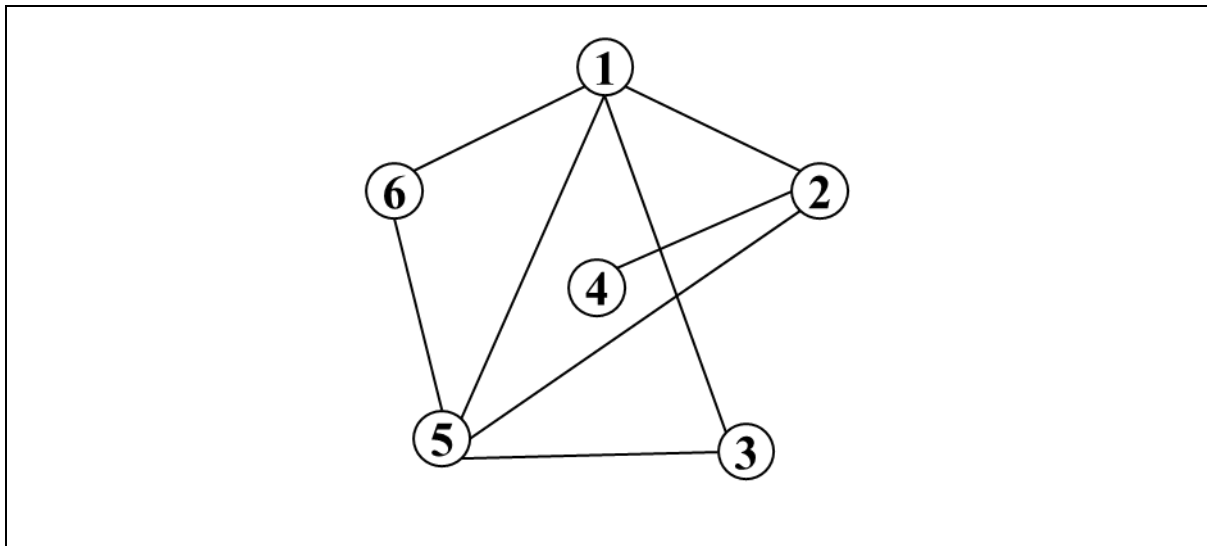
Keep your answers tidy. Messy, hard-to-read answers may penalize your mark.

The maximum total score for part II is **8**.

A **brain functional network** is obtained from **scalp EEG data** acquired during a cognitive task eliciting short-term memory. The aim is to extract information about **synchronicity** between brain activities in **theta** and **alpha** bands.

A1. Compute the **Local Efficiency** for the functional connectivity network, reported in the following figure: *(4 points)*

A2. Indicate which **connectivity estimator** (among those studied in the course) was used to obtain the network described in the text and shown in the previous figure. **Justify your choice.** Indicate **the pros and cons** of this estimator. *(4 points)*