## **Complexity Theory Past Paper**

#### Reference

• Credit: @Dimitrios Los

### **TIME**

P, NP, co-NP, completeness, UP

- y2022p6q4
- y2023p6q1
  - Hamiltonian cycle
- y2023p6q2
  - pseudo one-way function
- y2012p6q1
- y2014p6q1
  - o def, empty set
- y2018p6q3
  - o co-NP
- y2019p6q4
- y2017p6q2
- y2016p6q1
  - o UP
- y2015p6q1
- y2014p6q2
- y2011p6q2

### **Space**

L, NL, PSPACE, NPSPACE

- y2022p6q3
- y2020p6q4
  - Reachability
- y2018p6q4
  - Reach, NL-complete under logarithmic-space reductions.
- y2017p6q1
  - Difference in alphabet, binary vs unary

# Hierarchy

- y2002p6q12
  - TIME

- y2015p6q2
  - SPACE