

3 Uniform Quorum Systems

Definitions:

s-Uniform: A quorum system \mathcal{S} is *s-uniform* if every quorum in \mathcal{S} has exactly s elements.

Balanced access strategy: An access strategy Z for a quorum system \mathcal{S} is *balanced* if it satisfies $L_Z(v_i) = L$ for all $v_i \in V$ for some value L .

Claim: An s -uniform quorum system \mathcal{S} reaches an optimal load with a balanced access strategy, if such a strategy exists.

- a) Describe in your own words why this claim is true.
- b) Prove the optimality of a balanced access strategy on an s -uniform quorum system.