Aalto University
S-38.2121 Routing in Communication Networks

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Examination

Vastaa lyhyesti **vain viiteen (5)** kysymykseen.
*Give brief and concise answers to **only five (5)** questions.*

1. *What is routing and what are the key functions of routing? Describe the types of routing based on 3 different classifications and the properties of each type, give at least one example routing protocol for each type.*

2. *What are the shortcomings of RIP? What are the main difference between RIP and OSPF? Please describe the advantages and disadvantages of OSPF.*

3. *Give Dijkstra's shortest path first algorithm that can also find alternative paths.*

4. *Describe the RPF (reverse path forwarding) algorithm and its properties.*
   Describe the flood and prune algorithm and its properties. Give an example of a protocol based on this algorithm.

5. *Compare the headers of IPv4 and IPv6. Which are the main differences? How are extensions implemented in IPv6?*

6. *Describe the network elements and the operating principles of Mobile IP (IPv4 assumed).*