

S-72.423 Exercise 5.

Return your answer no later than on Tuesday 30.11.2004, 16:00 into the course's P.O. Box at the third floor of the E-wing.

Please, include the following information in your answers:

- *Your name (+ team member names)*
- *Your student number (+ team member student numbers)*

Answers in English, please.

1. Internet Protocols Application-Layer Protocols

List the higher layer internet protocols and the applications they support.

2. IP Routing

Describe IP routing in few sentences.

3. Transmission Control Protocol (TCP)

Describe the TCP connection establishment.

4. IPv4

- Show in a figure the TCP packet format and describe the fields that comprise it.
- What happens if there is no Time-to-Live counter in IPv4 IP packet?
- What are the benefits of using IP subnet addressing?

5. IPv6

- What is the main reason for IPv6 being developed?
- What is the new broadcast methods included in IPv6?
- How many bits does the new expanded addressing provide?