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**UNIVERSITÄT
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HS2020: 11072 Advanced Networking and Future Internet

Theoretical Exercises - Week 1

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QoS/QoE (2 points)

Q1. Give an example scenario (incl. appropriate metrics), where using QoS instead of QoE would be appropriate and vice-versa.

TCP vs UDP (2 points)

Q2. Briefly discuss the differences between TCP and UDP protocols. Which protocol would be used in an immersive/real-time communication scenario? Why?

Multimedia Data Transmission (3 points)

Q3. Explain the meaning of the following data transmission modes, and for each, give an example of it's application:

- Synchronous
- Asynchronous
- Isochronous

Traffic Engineering (3 points)

Q4. Explain what are the purposes of traffic engineering and software-defined networking. Is it possible to apply the SDN concept for traffic engineering, explain why.

P2P and ICN (2 points)

Q5. What are the differences between the current node-centric Internet architecture and the ICN-based architecture. Subsequently, what are the difference between a P2P and an ICN network?