CSC 458/2209 – Computer Networking Systems

Handout # 33:
Final Review

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Final Review

- Final exam logistics
- Review of principles
- Where next?

Final Exam Logistics

- Final Exam
  - Please check A&S website for time/location
- Examination aid allowed: non-programmable calculators
  - Closed-book, closed-notes
  - *No cell phones allowed*
- Bring ID: "Students are required to present a valid form of identification (ID) that contains both a current and visible photo and signature."

Final Exam

- Part I – Multiple choice
  - Multiple correct answers for each question
- Part II – Definitions
  - 2-3 sentences each
- Part III – Longer Questions
  - Might need more time than Part I & II
  - Still very simple problems
  - Similar to the midterm, sample problems, and problem sets

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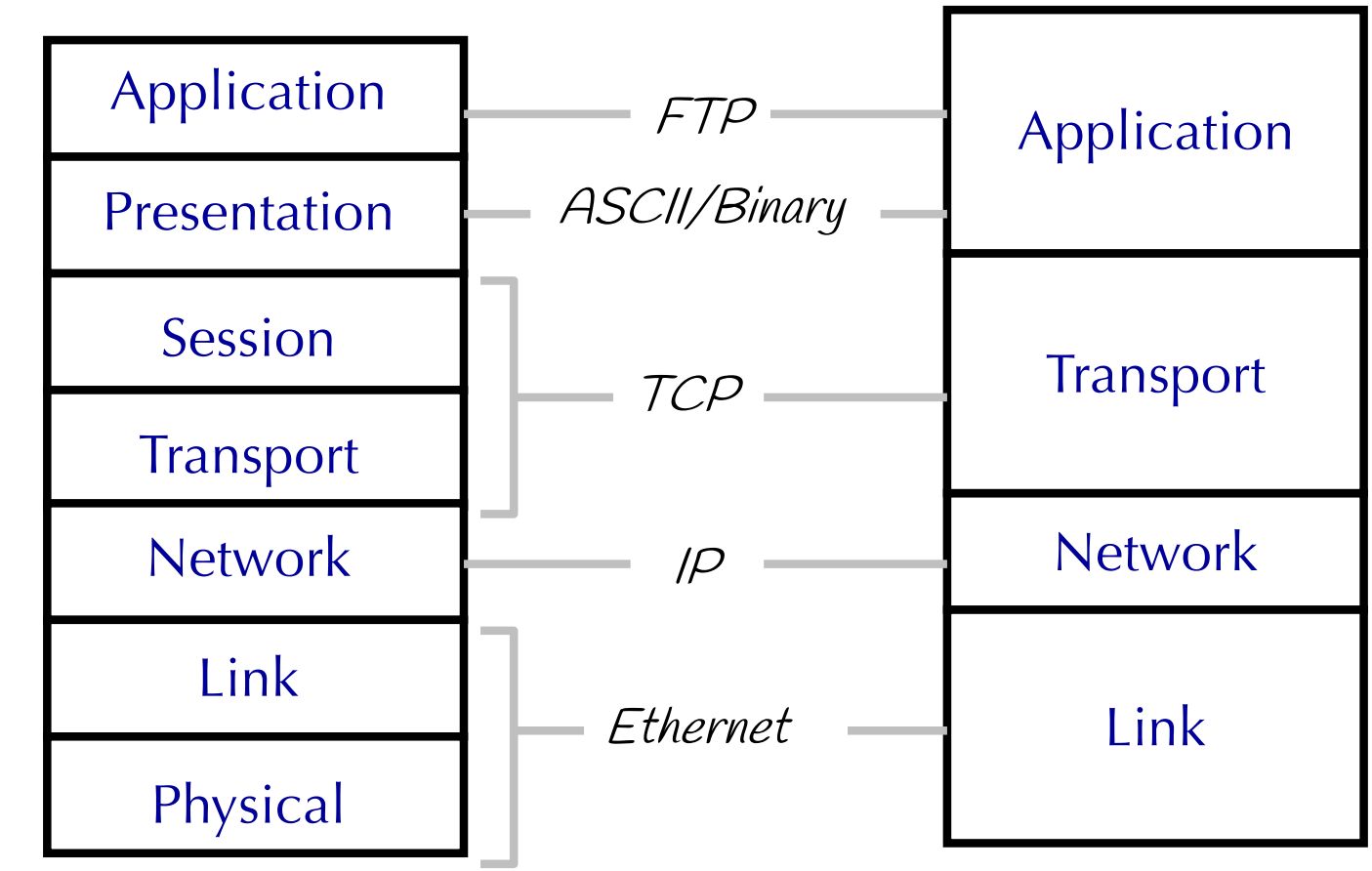
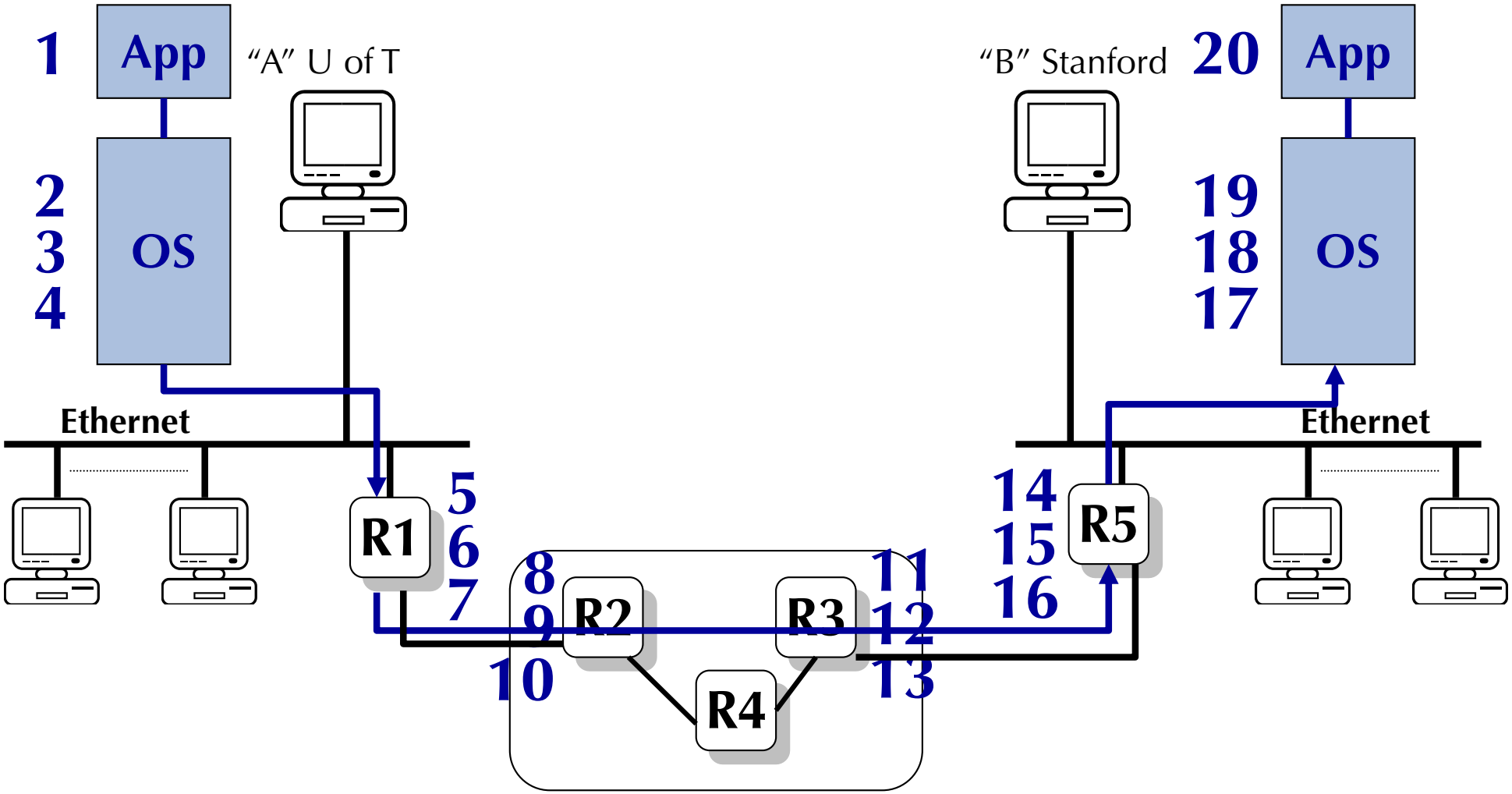
Review of Basic Concepts



The 7-layer OSI Model

The 4-layer Internet model

Example: FTP over the Internet Using TCP/IP and Ethernet



Review of Basic Principles

- Basic ideas:
  - Packet switching, statistical multiplexing, layering,
- Link Layer:
  - Channel capacity, encoding and clock recovery, error detection/correction, Ethernet switching
- Network Layer:
  - Fragmentation, Bellman-Ford, Dijkstra, addresses and lookups, BGP, IGP

Review of Basic Principles – Cont'd

- Transport Layer:
  - Flow control, congestion control, retransmissions and sliding windows, congestion avoidance (RED)
- Miscellaneous:
  - Queuing mechanisms
  - Middleboxes
  - Software-Defined Networking
  - Data Center Networking,
  - Networks for ML
  - Overlay Networks

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Where Next?

- Courses to take:
  - CSC2229: Networks for Machine Learning
  - CSC2206: Computer Systems Modelling
  - CSC2221: Introduction to Distributed Computing

- Individual study courses
  - CSC494 and CSC495
  - USRA
  - …

Thank You!