

Name ID Section Seat No

Sirindhorn International Institute of Technology Thammasat University

Final Examination: Semester 1, 2010

Course Title: ITS323 Introduction to Data Communications

Instructor: Steven Gordon

Date/Time: Friday 15 October 2010; 9:00–12:00

Instructions:

- This examination paper has 19 pages (including this page).
- Conditions of Examination: Closed book; No dictionary; Non-programmable calculator is allowed
- Students are not allowed to be out of the exam room during examination. Going to the restroom may result in score deduction.
- Students are not allowed to have communication devices (e.g. mobile phone) in their possession.
- Write your name, student ID, section, and seat number clearly on the front page of the exam, and on any separate sheets (if they exist).

- The final exam focuses on topics covered after the midterm. However basics of networking that we introduced before the midterm and apply to topics after the midterm, may be tested. For example, protocol layers, addressing, throughput, delay,
- At least 1 multiple choice questions is related to the 4 technologies covered in the assignment.
- 14 multiple choice questions. 2 marks per questions; 0 marks for wrong answer; 0 marks for no answer. [28 marks]
- 7 general questions. The main topics each question covers are:
 1. Transport Protocols [11 marks]
 2. IP addressing [13 marks]
 3. LANs, internetworking [13 marks]
 4. DNS [8 marks]
 5. Routing [10 marks]
 6. HTTP [8 marks]
 7. TCP [9 marks]
- Read the questions carefully. Some questions, including multiple choice, require you to give your answers in the provided boxes/spaces.
- The following two pages are provided at the end of the exam.

Reference Material

Selected well-known ports:

- FTP 20 and 21
- SSH 22
- Telnet 23
- SMTP 25
- DNS 53
- HTTP 80
- HTTPS 443

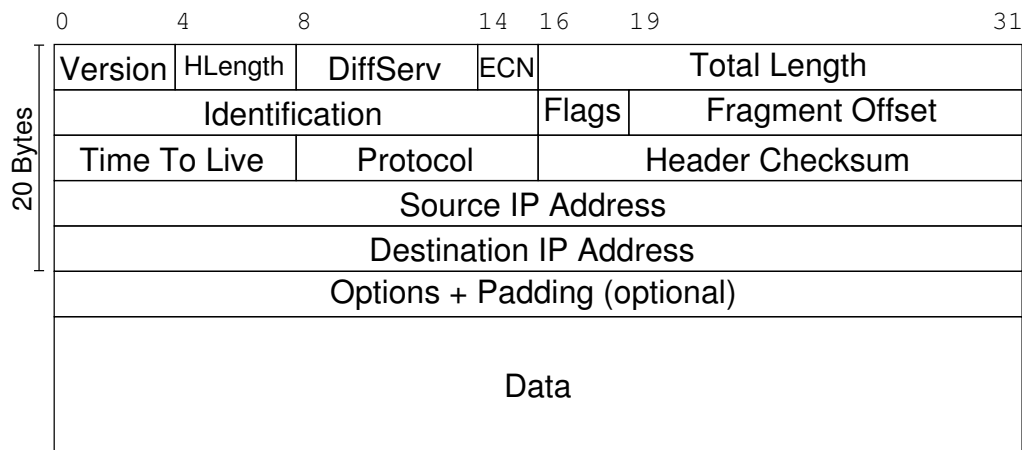


Figure 4: IP Datagram Format. Flags: Reserved, Don't Fragment, More Fragments

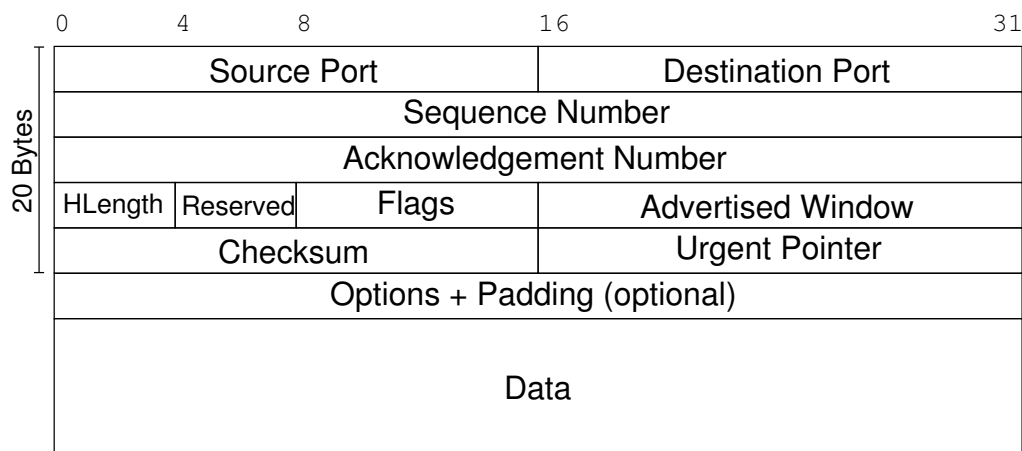


Figure 5: TCP Segment Format. Flags: CWR, ECE, URG, ACK, PSH, RST, SYN, FIN

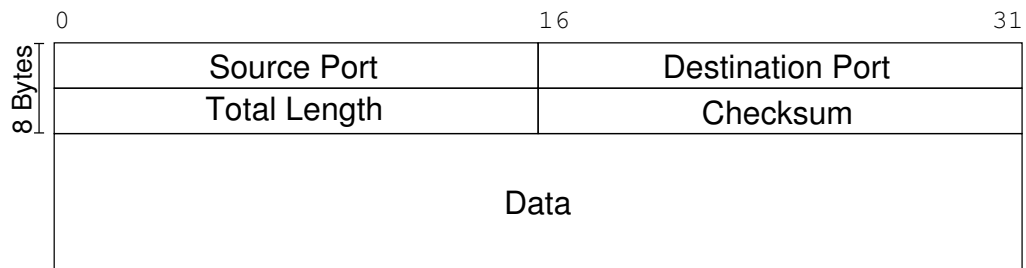


Figure 6: UDP Datagram Format

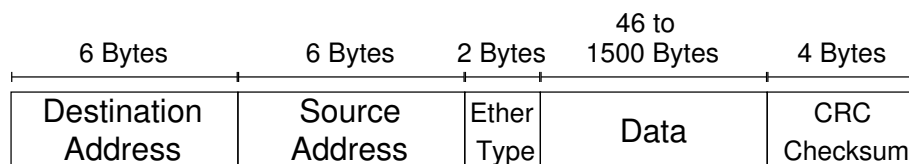


Figure 7: Ethernet Frame Format

Selected HTTP Status Codes:

- 200 Ok
- 304 Not Modified
- 404 Not Found