**COMS 465 – Computer Mediated Communication**
Dr. David J. Gunkel
Midterm Examination Study Guide

The midterm examination is scheduled for 75 minutes and will consist of four parts.

**I. TALK THE TALK** (10 x 1 point each)
Define the following acronyms and technical terms. For the acronyms, you can either explain what they mean or spell-out their elements. (i.e. NSF = "A national organization that funds scientific research and education" or "National Science Foundation").

- ASCII, TCP/IP, ARPANET, LAN, WAN, HTML, CMC, ENIAC, W3C, CPU, ROM, GUI, BIOS, WWW, RAM, DARPA, POST, OS, OOP, JPEG, FTP, ARPANET

- Bit, Ethernet, Machine Language, Data Bus Width, Timesharing, Telnet, Packet Switching, Difference Engine, Compute, Software, Clock Speed, Hypertext, Router, Byte, Hardware, Linux, Protocol, Quantum Computer, Mosaic, Javascript, Integrated Circuit, Alto, UNIVAC, Abacus, Luddite, Microprocessor

**II. IT'S WHO YOU KNOW** (10 x 2 points each)
Briefly identify each person(s) listed below by indicating the contribution(s) s/he has made to the development of or debate concerning communication technology.

Augusta Ada Byron, Tim Berners-Lee, Clare Sutcliffe, Ted Hoff, Charles Babbage, Joseph Marie Jacquard, Gordon Moore, Bob Metcalf, Linus Torvalds, Robert Noyce, J. C. R. Licklider, Ray Tomlinson, Apple, John Mauchly, J. Presper Eckert, Steve Jobs, Bill Gates, Steve Wozniak, IBM, Theodore Nelson, Marc Andreessen, Michio Kaku, Konrad Zuse, Vinton Cerf, William Schickard, Grace Hopper, G. W. F. Leibniz, Jack Kilby

**III. SHORT ANSWER** (5 x 8 point each)
Provide short responses (4-6 sentences) to the following questions:

1. Computers employ both input and output devices. List and briefly describe the function of two input devices and two output devices.

2. The two "laws" describing development of computer and network technology are Moore's Law and Metcalfe's Law. Define and briefly characterize both laws.

3. Computer networks can employ either circuit switching or packet switching. Describe each form of switching and indicate its advantages and disadvantages for computer networking.

4. The CPU manages four separate operations, called the "machine-cycle." What are the four operations of the machine-cycle and what happens at each stage?

5. The evolution of computer technology is divided into four distinct generations. List the dates corresponding to each generation and provide at least two distinguishing technological features that define each generation.

6. Programming languages are commonly organized into four generations. Identify the four generations and indicate their distinguishing characteristics.

7. Starting a computer is called "booting." The boot process involves four separate steps. List and briefly characterize the four steps the computer goes through, when it is booted.

8. The core language of the web is called HTML. List two HTML tags and briefly explain what each one does.

9. Computers perform four basic operations, called the IPOS cycle. Identify each step in the IPOS cycle and briefly describe what occurs at each step in the process.

10. Data may be represented in either analog or digital form. Briefly describe the difference between these two methods of data representation.

11. Computer storage can be either volatile or non-volatile. What is the difference between these two types of storage and give an example of both volatile and non-volatile forms of storage for the personal computer.

12. The Internet and the World Wide Web are commonly confused with each other. Briefly describe the difference between the Internet and the World Wide Web.

**IV. ESSAY** (1 x 30 points)

The final part of the exam will provoke critical reflection on or assessment of a particular issue previously discussed in seminar meetings. You will be provided with three options. You are to select one question and write an essay response to the question or problem described. Please remember that this is an essay response. You must have a clearly stated thesis, evidence and support to prove your thesis, and a conclusive ending. Unlike the other three sections, there is not necessarily a right answer in this section. There are only well devised and argued responses.

**Exam Procedure:** The first three parts of the exam will be written on the examination sheet. Students will write responses to these questions WITHOUT any support material (i.e. notes, books, online resources, etc.). The essay will be written on the computer and will be assessed for both content and mechanics (grammar, punctuation, spelling, etc.). Since the essay is not about a "right answer" but about a well-crafted argument, students may use support materials (i.e. class notes, books, online resources, word processing tools, etc.). The essay will be emailed to the instructor at the end of the exam period.