

**Survival Guide  
CGS2100  
Exam 1  
Chapters 1-5**

**Chapter 1: Using Technology to Change the World**

- 1) Technology on the World Stage
  - a) **Social Networking**: the gathering of groups of people using online tools to connect and exchange ideas
  - b) Human Rights
    - i) [www.ted.org](http://www.ted.org)
    - ii) The Witness Project
      - (1) Use media to share abuses of human rights
  - c) **The Digital Divide**: the term for the gap in levels of internet access and the availability of technical tools in different regions of the world
- 2) Technology and Our Society
  - a) Factors that lead to Better Personal and Performance Satisfaction
    - i) **Autonomy**: the freedom to work without constant direction and control
    - ii) **Mastery**: the feeling of confidence and excitement from seeing your own skills progress
    - iii) **Purpose**: simply the understanding that you are working for something larger than yourself
  - b) **Creative Surplus**: the ability of the world's populace to volunteer and collaborate on large projects
  - c) How We Think About Each Other
    - i) Women outnumber men in use of social media
    - ii) Marketing to the norm (ex: men between 25 and 34)
  - d) How We Connect
    - i) Marketing
      - (1) **QR (Quick Response) Codes**: lets any piece of print in the real world host a live link to online information and video content
      - (2) **Crowdsourcing**: checking in with the voice of the crowd
    - ii) Access Versus Ownership
      - (1) **Swap.com**: uses peer-to-peer connections to find the best matches to sell used DVDs, games, etc.
      - (2) **Collaborative Consumption**: joining together to use a product more efficiently
  - e) Technology and Your Life
    - i) **Computer Literate**: being familiar enough with computers that you understand their capabilities and limitations and you know how to use them efficiently
    - ii) Being a Savvy Computer User
      - (1) Avoids hackers and viruses
      - (2) Protects privacy
      - (3) Understands the real risks

- (4) Uses the internet and web wisely
- (5) Avoids online annoyances
- (6) Is able to maintain, upgrade and troubleshoot a computer
- iii) Preparing for Your Career
  - (1) **Information Technology (IT)**: a field of study focused on managing and processing information and the automatic retrieval of information
  - (2) **Data Mining**: the process of searching through huge amounts of data with the hopes of finding a pattern
  - (3) **Augmented Reality**: a combination of our normal sense of the objects around us with an overlay of information displayed
- iv) Psychology: You Should Smile... Now
  - (1) **Affective Computing**: computing that relates to emotion or deliberately tries to influence emotion
- 1) Technology in Focus: History of the P.C.
  - a) Altair 8000, the first personal computer (\$395.00 or \$498.00 which is about \$2,000.00 today)
  - b) No keyboard, monitor or printer
  - c) Data inputs on the front put in 1s or 0s and then gave the results of the programs
- 2) The Apple 1 and 2
  - a) **Steve Wozniac**, an employee of HP, became fascinated with the personal computer industry
  - b) **Steve Jobs**, working for Atari at the time, likes Wozniac's prototypes and together formed the **Apple 1**
  - c) **Apple Computer Company**: formed April 1<sup>st</sup> 1976
  - d) **Apple 2**: came in 1977 and was an improvement to the Apple 1
    - i) Had color monitor, sound and cost around \$1,300 at the time
    - ii) 4 kb RAM
    - iii) Optional floppy disk drive
    - iv) Most successful product in the company's early line
  - e) **Apple 3**: 1980 release
    - i) included spreadsheet programs, games, word processor
- 3) The Commodore PET and TRS-80
  - a) **Commodore PET 2001**
  - b) **TRS-80**
    - i) "a \$595 home computer"
      - (1) Immediately popular: sold 10,000 in first month
      - ii) 4 kb memory
- 4) The Osborne
  - a) The first portable computer, released in April 1981
  - b) Weighed 24.5 pounds
  - c) \$1,795
  - d) 64 kb memory
  - e) Following the release of **The Executive**, a successor to The Osborne, the Osborne company closed and Compaq bought the designs
- 5) IBM PCs
  - a) **IBM PC**



- i) IBM's first personal computer
  - ii) Marketed through Sears and Computer land
  - iii) \$1565
  - iv) 64 kb memory
- 6) Other Important Advancements
- a) **Hardware**
  - b) Advances in programming languages
  - c) The importance of BASIC
    - i) Programming languages: FORTRAN, ALGOL, COBOL
    - ii) **Beginners All-Purpose Symbolic Instruction Code (BASIC)**
      - (1) Revolutionized software
      - (2) Easy to learn
      - (3) Bill Gates and Paul Allen used it to write for the Altair and led to the creation of Microsoft
  - d) The Advent of Operating Systems
    - i) **Disk 2:** floppy disk designed by Steve Wozniac and was 5.25 inches, introduced in 1978
    - ii) **Disk Operating System (DOS):** 1977, designed by Steve Wozniac, was the OS that controlled the first Apple Computers
    - iii) **The Control Program for Microcomputers (CP/N):** developed by Gad Kildall, first OS designed for Intel 8080 chip, then founded his own company called Digital Research
    - iv) **MS-DOS:** based on **Quick and Dirty Operating System (QDOS)** developed by Seattle Computer Products
  - e) The Software Application Explosion: VisiCalc and Beyond
    - i) **VisiCalc:** created by Harvard Business School students Dan Bricklin and Bob Frankston, a spreadsheet program to be used on PCs
    - ii) Other spreadsheet programs: **Lotus 1-2-3** (1983) and **Microsoft Excel** (1985)
    - iii) **WordStar:** the first word processing application
    - iv) **Word for MS-DOS:** the precursor to **Microsoft Word**
    - v) **Graphical User Interface (GUI):** allows users to interact with the computer more easily
  - f) **The Lisa and The Macintosh**
    - i) **Lisa:** the first successful PC that used a GUI, priced too high (at \$9,995)
    - ii) **Macintosh:** everything the Lisa had, and more and cost a third of the price
  - g) The Internet Boom
    - i) **Mosaic:** a web browser introduced in 1993 that caused web traffic to increase by 350%
    - ii) **Windows 95:** produced by Microsoft, included a web browser (Internet Explorer) and also Microsoft Office applications
  - h) Making the PC: Early Computers
    - i) The Pascaline Calculator and the Jacquard Loom
      - (1) **The Pascaline:** the first accurate mechanical calculator, created by French mathematician **Blaise Pascal** in 1642
      - (2) **Jacquard Loom:** a loom capable of weaving complex patterns