**Day 1 – Focus on Topic A (Understanding Computers)**

Multiple Choice Topics:

Binary Numbers, ASCII Conversion, OS Details, WWW Details

Sample Question #1

You will be given a scenario (e.g. intelligent cash register, television integrated with Netflix ) and will be asked to recommend a software (and hardware) solution using the following guidelines:

1. Type of user interface (e.g. GUI, command line, remote controller, etc.)
2. Requirement for permanent storage (e.g. HDD, flash drive) and I/O Device management
3. Processor size / speed and RAM memory requirements
4. Does the operating system need to provide multi-user, multi-process, or real time-control
5. What application software would need to be supported
6. What security would need to be provided
7. What network interfaces would need to be provided
8. What operating system would you recommend based on the above choices (e.g. Windows, Mac, Linux, z/OS, QNX, etc.) Justify your answer.

Sample Question #2

You will be given a scenario (e.g. convenience store) and will be asked to design a LAN for this scenario that addresses the following issues:

1. What devices will be connected to the LAN
2. What network applications will these devices need to use
3. How will these devices be connected to the LAN (e.g. Ethernet, Wifi, etc.) Justify your choices.
4. How will you LAN be connected to the Internet (what technology e.g. Fibe) and recommend a ISP (e.g. Bell). Justify your choices.
5. Draw a labeled diagram of your LAN.

**Day 2 – Focus on Topic C (Computers & Society)**

Multiple Choice Topics:

File Access, Environmental Concerns, Security Concerns, AI Eliza & Turing

Sample Question #1

You will be answered to answer the question “Will AI Take My Job” by using specific supporting facts from the case studies discussed in class.

1. identify a specific job
2. Discuss how AI could improve the job for human workers
3. Discuss how AI could reduce the need for human workers
4. Explain how AI impacts this job at the current time and how it might change the job in the future
5. Make sure to provide specific examples from the case studies

Sample Question #2

You will be asked to discuss a specific malware attack covered in class by explaining the following:

1. Summarize the attack (e.g. where, when)
2. Identify the type of malware (e.g. Worm, Trojan, etc.)
3. Explain how the attack spread and infected the computers
4. Explain how the attack impacted users and organizations
5. Explain how the attack was controlled and how the malware was removed from computers

**Day 3 – Focus on Topic B (Programming)**

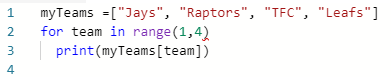
Multiple Choice Topics:

No Multiple Choice Questions

Sample Question #1

The following is a listing of a Python program that contains some errors that you need to fix.

1. Find the errors and list the line numbers where they occur.
2. For each error, explain your correction (code fix)
3. Explain the function of the program by referring to how the input variables affect the output.



Sample Question #2

You will be asked to write a Python Turtle program that includes:

1. Reading user input
2. Drawing a complex shape using different pen colors
3. Use of one or more loops to repeat shapes
4. Use of one or more if statements to check user input