**Multiple Choice [12 Marks]**

1. Which of the following topics is NOT part of a “Terms of Service” contract?
   1. Proper or expected usage
   2. Accountability for online actions,
   3. Use personal data
   4. Payment details such as membership or subscription fees
   5. [Opt-out](https://en.wikipedia.org/wiki/Opt-out) policy describing procedure for account termination
2. Which of the following topics is part of a “Privacy Policy” contract?
   1. Proper or expected usage
   2. Accountability for online actions,
   3. Payment details such as membership or subscription fees
   4. [Opt-out](https://en.wikipedia.org/wiki/Opt-out) policy describing procedure for account termination
   5. Use personal data
3. Which of the following features is NOT a part of a Software IDE?
   1. Source code editor
   2. Intelligent code completion
   3. Build automation tools
   4. Version tracking and control
   5. Integrated help and documentation
4. Which of the following features is NOT a part of a Version Control System?
   1. Version tracking and control
   2. Backup and restore
   3. File sharing
   4. Compiler / Verification tools
   5. Access from multiple computers
5. Which of the following is NOT an internal part of a desktop computer?
   1. Motherboard
   2. USB memory stick
   3. Sound card
   4. Video card
   5. Ethernet Controller
6. The capacity of modern RAM memory is measured in:
   1. Bytes
   2. Kilobytes
   3. Megabytes
   4. Gigabytes
   5. Terabytes
7. The capacity of modern Ethernet connections is measured in:
8. Kilobytes
9. Megabytes
10. Kilobits per second (Kbps)
11. Megabits per second (Mbps)
12. Files per second
13. Which of the following is NOT a feature of “Cache” memory?
14. Faster access than main memory
15. Stores frequently accessed data and instructions
16. Is separate from the processor or hard drive
17. Cache memory is much smaller capacity than main memory
18. Many devices use Cache Memory
19. A “byte” is made up of how many bits of computer memory?
20. 1 bit
21. 4 bits
22. 8 bits
23. 16 bits
24. 23 bits
25. A 32 bits makes up this size of computer memory?
26. 1 byte
27. 1 character
28. 1 word
29. 1 long word
30. 1 string
31. A user types in a program and forgets to add a semi-colon to one of the command lines. This is an example of a:
    1. Typing Error
    2. Syntax Error
    3. Logic Error
    4. Run-Time Error
    5. Spelling Error
32. A user creates a program that verifies and uploads to the Arduino board but does nothing when it runs. This is an example of a:
    1. Programming Error
    2. Syntax Error
    3. Logic Error
    4. Run-Time Error
    5. Computer Error

**Short Answer [20 Marks]**

1. Mr. Liang needs to organize a collection of image files from photographs taken for the year book. The photographs are from various clubs, sports teams, and events around the school.
   1. Create a list of 10 sample image file names related to possible clubs, teams, and events. [2]
   2. Create a set of folders that could be used to organize these sample image files. [2]
   3. Sort the sample image files into the appropriate folders. [2]
2. Mr. Liang also wants to make sure his files are securely backed up and can be shared by students working on the year book. What solution do you recommend? [2]
3. Explain how cache memory can speed up a processor. [2]
4. Draw a diagram showing how a negative integers are stored in computer memory. [3]

*Program Specification – For Use With The Remaining Questions In This Section*

The sample Arduino program reads commands from the serial monitor, flashes the on-board LED, and writes information back to the serial monitor. The details are as follows:

* If the user types a number less than 10 into the serial monitor then the program flashes the on-board LED.
* If the user types a number greater or equal to 10 into the serial monitor then the program prints “Number Too Big!” to the serial monitor.

1. List the “input objects” mentioned in the program specification above. [2]
2. List the “output objects” mentioned in the program specification above. [2]
3. Create a flowchart for the action sequence described above. [3]