

## Short Essay Questions

- when preparing your answers for these short essay questions, please keep in mind that each question is worth 4 marks which implies that you need to make at least four points. Also, please note that terms like **Describe, Discuss, Differentiate** mean that we are looking for a sentence or two for each point (not just a list of terms). Twelve (12) of these short essay questions will appear on Test 1.

### Lecture 1 (Sabine McConnell)

1. Describe the machine cycle.
2. Describe the three main components of a computer.
3. Describe four components of a CPU.
4. Describe four different types of storage used in a computer.
5. Why is it important to have fans in a computer?

### Lecture 2 (Sabine McConnell)

6. Describe the differences between wired and wireless networks.
7. Describe some of the ways we can use to classify networks (by topology, architecture, size).
8. Describe three types of wired networking media.
9. Describe the roles of TCP and IP
10. Describe the differences between accessing the Internet using cable or phone lines.

### Lecture 3 (Jacques Beland)

11. What is an entity and how is it represented in an Relational Database Management System (RDBMS)?
12. What does the term "relation" mean in reference to relational databases?
13. What are keys and how are they used in RDBMS?
14. You are asked to audit the data security measures for a database system. What is data security? What steps should be taken to secure a databases?
15. Describe what is meant by an N-tier database system?

### Lecture 4 (Brian Patrick)

16. Briefly describe the functionality of an operating system
17. Differentiate between multitasking and multiprocessing.
18. Briefly describe four utility programs that you use on your computer.
19. Briefly describe what types of application software are typically including in an office suite. Give an example of each type of software.
20. Outline the advantages and disadvantages of cloud-based computing.

### Lecture 5 (Brian Srivastava)

21. We talked in class about what hackers do after patches are released? What do they do, and how is this problematic?
22. Give the five characteristics of strong passwords. Because all your passwords should be unique, what should be used.
23. Give two pros and two cons of the NSA sitting on NIST cryptographic standards boards. (National Security Agency in the US, on the National Institute of Science and Technology),
24. Give four things you trying to protect with security.
25. List four corporate activities we discussed in class that have undermined security or privacy.

### Lecture 6 (Richard Hurley)

26. What is the difference between syntax errors and semantic errors? Give an example of each.
27. Describe four of the five phases of the Program Development Life Cycle.
28. Discuss four tools use to aid in Program Design.
29. Describe four different considerations when choosing a programming language.
30. Give two similarities and two differences between the programming languages of FORTRAN and COBOL. Stating that they are both programming languages is not worth any marks.