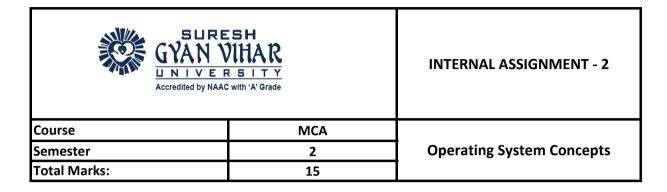


Q.1. Write answers for any two questions from below. (5 marks each – Word limit – 500)

- **A.** What are the advantages and disadvantages of using the same system call interface for manipulating both files and devices?
- **B.** Mention the objectives and functions of Real-Time Embedded systems.
- **C.** Write an overview of computer system.

Q.2. Write short notes on all of the following topics (1 mark each - Word limit - 100)

- **A.** Explain the importance of Real-Time Embedded systems.
- **B.** The Safe, unsafe, and deadlock state spaces.
- C. The benefits of multithreaded programming
- **D.** Different attributes of the process.
- **E.** What are the various attributes that are associated with an opened file?



Q.1. Write answers for any two questions from below. (5 marks each – Word limit – 500)

- **A.** What is the cause of thrashing? How does the system detect thrashing? How to eliminate this problem?
- **B.** With a neat diagram, explain the layered structure of UNIX operating system.
- **C.** What is an Operating system? Describe the Operating-System Functions. Explain the overview of an Operating system with neat sketch.

Q.2. Write short notes on all of the following topics (1 mark each - Word limit - 100)

- **A.** What is a deadlock?
- **B.** What is a Virtual Memory? Discuss the benefits of virtual memory technique.
- **C.** Define Thread. Write the differences between user-level and kernel-level threads.
- **D.** The various security issues that arise in multiprogramming and time-shared systems.
- **E.** Define Busy Waiting? How to overcome busy waiting using Semaphore operations.