Code: A25AB

B V RAJU INSTITUTE OF TECHNOLOGY

(UGC AUTONOMUOUS)

B.Tech 3 Year 1 Training Examination, May 2021

OPERATING SYSTEMS

Time: -1 Hours **Max Marks: 100**

I. Answer Marks: 6

1. What are the advantages of a multiprocessor system?
2. What is time- sharing system?
3. Describe the objective of multiprogramming.
4. What is a virtual memory?
5. What is SMP?
6. What is demand paging?
7. What are real-time systems?
8. How are server systems classified?
9. What is kernel?
10. Explain the main purpose of an operating system?

II. Answer Marks: 10

1. Enumerate the different RAID levels.
2. Describe Banker’s algorithm
3. Give some benefits of multithreaded programming.
4. How are server systems classified?
5. Briefly explain FCFS.
6. State the main difference between logical from physical address space.
7. What is RR scheduling algorithm?
8. What is a thread?
9. What factors determine whether a detection-algorithm must be utilized in a deadlock avoidance system?
10. What are necessary conditions which can lead to a deadlock situation in a system?

III. Answer Marks: 10

1. How does dynamic loading aid in better memory space utilization?
2. What is the basic function of paging?
3. What is Direct Access Method?
4. What is a socket?
5. Give an example of a Process State.
6. When does thrashing occur?
7. What are overlays?
8. How does swapping result in better memory management?
9. What is the best page size when designing an operating system?
10. What is fragmentation?

IV. Answer Marks: 10

1. What is spooling?
2. What are the different types of CPU registers in a typical operating system design?
3. What is root partition?
4. What is caching?
5. What is the purpose of an I/O status information?
6. What is multitasking?
7. Explain pros and cons of a command line interface?
8. What are device drivers?
9. When designing the file structure for an operating system, what attributes are considered?
10. What are the primary functions of VFS?

V. Answer Marks: 10

1. What is preemptive multitasking?
2. What is an Assembler?
3. What is GUI?
4. Differentiate internal commands from external commands.
5. What is NOS?
6. What is plumbing/piping?
7. How would a file name EXAMPLEFILE.TXT appear when viewed under the DOS command console operating in Windows 98?
8. What are interrupts?
9. Why partitioning and formatting is a prerequisite to installing an operating system?
10. What is a folder in Ubuntu?

VI. Answer Marks: 10

1. What is the meaning of “export” command in Ubuntu?
2. Explain what is Unity in Ubuntu? How can you add new entries to the launcher?
3. How Buffering can improve the performance of a Computer system?
4. Explain how you can reset Unity Configuration?
5. Explain how to access Terminal?
6. What is the relationship between operating systems and computer hardware?
7. Explain the purpose of using a libaio package in Ubuntu?
8. Explain why Ubuntu is safe and not affected by viruses?
9. What is the use of behavior tab in Ubuntu?
10. What are the primary differences between Network Operating System and Distributed Operating System?

VII. Answer Marks: 10

1. What are the advantages of multiprogramming?
2. What are the differences between Real Time System and Timesharing System?
3. What is Shortest Remaining Time, SRT scheduling?
4. What are the differences between Batch processing system and Real Time Processing System?
5. What is the Difference between a Job and a Process?

6. What are the advantages of Multiprocessing or Parallel System?
7. What is scheduling? What criteria affects the schedulers performance?
8. What is a process scheduler? State the characteristicsof a good process scheduler?
9. What are the differences etween multiprocessing and multiprogramming?
10. Explain time slicing. How its duration affects the overall working of the system.

VIII. Answer Marks: 10

1. Explain semophores and write a short note on it.
2. Find out which algorithm among FCFS, SJF And Round Robin with quantum 10, would give the minimum average time for a given workload.
3. What is Highest Response Ratio Next (HRN) Scheduling?
4. Explain pseudo parallelism? Describe the process model that makes parallelism easier to deal with.
5. What is the main purpose of an operating system?
6. What are the differences between paging and segmentation?
7. What are the different principles which must be considered while selection of a scheduling algorithm?
8. What is an operating system?
9. Explain various allocation algorithms.
10. When does a page fault occur? Explain various page replacement strategies/algorithms.

IX. Answer Marks: 10

1. What is the difference between micro kernel and macro kernel?
2. What are the different states of a process?
3. What do you mean by a process?
4. What is the concept of reentrancy?
5. What is a socket?
6. What is monolithic kernel?
7. What is the difference between process and program?
8. What is kernel?
9. What are the different operating systems?
10. What is a real-time system?

X. Answer Marks: 10

1. What is the concept of demand paging?
2. What is SMP?
3. What are the four necessary and sufficient conditions behind the deadlock?
4. What is a thread?
5. What is FCFS?
6. What is the advantage of a multiprocessor system?
7. What is the use of paging in operating system?
8. What is virtual memory?
9. What is RAID? What are the different RAID levels?
10. What is thrashing?

XI. Answer Marks: 10

1. What is the difference between internal commands and external commands?
2. What is spooling?
3. How many types of fragmentation occur in Operating System?
4. What is semaphore?
5. Which are the necessary conditions to achieve a deadlock?
6. What is fragmentation?
7. What is a binary Semaphore?
8. What is the difference between logical address space and physical address space?
9. What is deadlock? Explain.
10. What is Banker's algorithm?

XII. Answer Marks: 10

1. What is a Thread? What are the differences between process and thread?
2. What are overlays?
3. When does trashing occur?
4. What is a process and process table? What are different states of process
5. What is aging in Operating System?
6. What is a binary Semaphore?
7. What are the advantages of multithreaded programming?
8. What are the benefits of multithreaded programming?
9. What is the difference between logical and physical address space?
10. What is a binary Semaphore?

XIII. Answer Marks: 10

1. What are the different scheduling algorithms
2. What are the necessary conditions for deadlock?
3. What are the different operating systems?
4. Differences between mutex and semphore?
5. What is Belady’s Anomaly?
6. What are the basic functions of an operating system?
7. What is deadlock?
8. What is Thrashing?
9. What is kernel?
10. What is Virtual Memory? How is it implemented?

XIV. Answer Marks: 10

1. What is a thread?
2. What are the states of a process?
3. What is fragmentation? Tell about different types of fragmentation?
4. What is process synchronization?
5. What is virtual memory?
6. What is thrashing?
7. What is starvation and aging?
8. What is difference between micro kernel and macro kernel?
9. What is context switching?
10. What are necessary conditions for dead lock?

XV. Answer Marks: 10

1. What is logical and physical addresses space?
2. What is Memory-Management Unit (MMU)?
3. What is cache-coherency?
4. What is Throughput, Turnaround time, waiting time and Response time?
5. What is cache memory?
6. Differentiate between Complier and Interpreter?
7. When is a system in safe state?
8. What is a trap and trapdoor?
9. What is a Real-Time System?
10. Explain the concept of the Distributed systems?