SHRI GNANAMBICA DEGREE COLLEGE, MADANAPALLE
(AUTONOMOUS)
PROGRAMME: BCA (General)
II YEAR-IV-SEM
COURSE: Operating Systems
QUESTION BANK

Question Bank:

Unit-1:

SHORT ANSWER QUESTIONS

1. Define OS with an example?
2. List basic functions of an operating system?
3. Explain user operating system interface?
4. Define multiprogramming.
5. What is OS structure?
6. What is a system call?

LONG ANSWER QUESTIONS

1. Explain the history and evolution of operating systems.
2. Explain the basic functions of an operating system in detail.
3. Describe computer system architecture with a neat diagram.
4. Explain different operating system structures.
5. Explain OS services in detail?
6. Explain system calls and types of system calls.

UNIT – 2 : PROCESS MANAGEMENT & SCHEDULING

SHORT ANSWER QUESTIONS

1. Define process.
2. What is Process Control Block (PCB)?
3. List different states of a process.
4. What is process scheduling?
5. What is pre-emptive and non pre-emptive scheduling?
6. What is client-server communication?

LONG ANSWER QUESTIONS

1. Explain operations on processes.
2. Explain communication in client-server systems.
3. Explain scheduling criteria.
4. Explain Scheduling Algorithms

UNIT – 3 : SYNCHRONIZATION & DEADLOCKS

SHORT ANSWER QUESTIONS

1. What is process synchronization?
2. Define critical section.
3. What is semaphore?
4. What are the types of semaphores?
5. What is deadlock?
6. List necessary conditions for deadlock.
7. What is circular wait?

LONG ANSWER QUESTIONS

1. Explain the critical section problem and its requirements.

2. Explain semaphores and their implementation.
3. Explain classical problems of synchronization.
4. Explain deadlock characterization.
5. Explain deadlock prevention.
6. Explain deadlock avoidance
7. Explain deadlock detection and recovery.

UNIT – 4 : MEMORY MANAGEMENT
SHORT ANSWER QUESTIONS
1. What is memory management?
2. Define swapping.
3. What is contiguous memory allocation?
4. What is paging?
5. What is segmentation?
6. Define internal and external fragmentation.

LONG ANSWER QUESTIONS
1. Explain swapping with advantages and disadvantages.
2. Explain contiguous memory allocation.
3. Explain paging with example.
4. Explain segmentation.
5. Explain page replacement algorithms.

UNIT – 5 : FILES AND DIRECTORIES
SHORT ANSWER QUESTIONS
1. List file operations.
2. What is file system?
3. Name file allocation methods.
4. What is contiguous allocation?
5. What is indexed allocation?
6. What is linked allocation?

LONG ANSWER QUESTIONS
1. Explain directory structures.
2. Explain file system implementation.
3. Explain file allocation methods with comparison.
4. Compare UNIX and Windows operating systems.