Started on	Thursday, 12 June 2025, 2:52 PM
State	Finished
Completed on	Thursday, 12 June 2025, 3:01 PM
Time taken	8 mins 30 secs
Marks	23.00/25.00
Grade	**92.00** out of 100.00

Question 1

Complete

Mark 1.00 out of 1.00

What happens when a program tries to access memory beyond its allocated space?

- a. Deadlock
- b. Memory Leak
- c. Segmentation Fault
- d. Stack Overflow

Question 2

Complete

Mark 1.00 out of 1.00

Which of the following best describes internal fragmentation?

- a. Memory leaks
- b. Unused memory outside allocated blocks
- c. Unused memory within allocated blocks
- d. Cache misses

Question 3

Complete

Mark 1.00 out of 1.00

Which of the following is NOT a valid memory allocation function in C/C++?

- a. realloc
- b. malloc
- c. calloc
- d. alloc

Question 4

Complete

Mark 1.00 out of 1.00

The least recently used (LRU) algorithm is a type of:

- a. Page replacement algorithm
- b. Memory allocation
- c. Garbage collection algorithm
- d. Segmentation algorithm

Question 5

Complete

Mark 1.00 out of 1.00

What is a “dangling pointer”?

- a. A pointer to a null value
- b. A pointer to garbage value
- c. A pointer to the stack
- d. A pointer to a freed memory location

Question 6

Complete

Mark 1.00 out of 1.00

Memory compaction is used to solve:

- a. Page fault
- b. External fragmentation
- c. Internal fragmentation
- d. Stack overflow

Question 7

Complete

Mark 1.00 out of 1.00

Which of the following is a sign of stack overflow?

- a. High CPU usage
- b. Function recursion without base case
- c. Unfreed memory
- d. Infinite loop

Question 8

Complete

Mark 1.00 out of 1.00

Garbage collection is used in languages like Java to:

- a. Automatically free unused memory
- b. Reuse variables
- c. Prevent memory leaks
- d. Allocate memory faster

Question 9

Complete

Mark 1.00 out of 1.00

What is the purpose of the `malloc()` function in C?

- a. Free memory
- b. Allocate memory on stack
- c. Allocate memory on heap
- d. Allocate static memory

Question 10

Complete

Mark 1.00 out of 1.00

Which memory is used for function call and local variable storage?

- a. Stack
- b. ROM
- c. Cache
- d. Heap

Question 11

Complete

Mark 1.00 out of 1.00

A TLB (Translation Lookaside Buffer) improves:

- a. Virtual to physical address translation
- b. Cache access time
- c. Stack speed
- d. Swapping performance

Question 12

Complete

Mark 1.00 out of 1.00

What is a benefit of using dynamic memory allocation?

- a. No fragmentation
- b. Flexibility at runtime
- c. Faster access time
- d. Less memory usage

Question 13

Complete

Mark 1.00 out of 1.00

In virtual memory, what happens when a required page is not in memory?

- a. Page Fault
- b. Segmentation Fault
- c. Stack Overflow
- d. TLB Miss

Question 14

Complete

Mark 1.00 out of 1.00

Which of the following causes a memory leak?

- a. Double freeing a pointer
- b. Allocating memory without freeing it
- c. Page fault
- d. Stack overflow

Question 15

Complete

Mark 1.00 out of 1.00

What happens if you `free()` an already freed pointer in C?

- a. Memory leak
- b. Undefined behavior (possible crash)
- c. Segmentation fault guaranteed
- d. Nothing

Question 16

Complete

Mark 1.00 out of 1.00

What kind of memory allocation is used for recursion?

- a. Heap
- b. ROM
- c. Swap space
- d. Stack

Question 17

Complete

Mark 1.00 out of 1.00

Segmentation differs from paging because segmentation:

- a. Supports logical divisions like functions, arrays
- b. Uses TLB
- c. Is managed by hardware
- d. Has fixed-size blocks

Question 18

Complete

Mark 1.00 out of 1.00

Copying garbage collectors work by:

- a. Swapping memory blocks
- b. Copying reachable objects to a new memory area
- c. Deleting unused files
- d. Freeing memory manually

Question 19

Complete

Mark 1.00 out of 1.00

What does the operating system use to translate virtual addresses to physical addresses?

- a. Program Counter
- b. Page Table
- c. Memory Table
- d. Stack Pointer

Question 20

Complete

Mark 1.00 out of 1.00

The OS swaps memory pages to disk to:

a. Free CPU registers
b. Increase cache size
c. Manage memory more efficiently
d. Improve network speed

Question 21

Complete

Mark 0.00 out of 1.00

Which of the following helps avoid memory leaks in C++?

a. Raw pointers
b. Void pointers
c. Smart pointers
d. Global variables

Question 22

Complete

Mark 1.00 out of 1.00

The heap memory is primarily used for:

a. Temporary variables
b. Static variables
c. Dynamic memory allocation
d. Code segment

Question 23

Complete

Mark 1.00 out of 1.00

The stack grows:

a. Both
b. Downward in memory
c. Randomly
d. Upward in memory

Question 24

Complete

Mark 1.00 out of 1.00

Which memory management technique allows non-contiguous memory allocation?

- a. Segmentation
- b. Both A and B
- c. Paging
- d. Stack Allocation

Question 25

Complete

Mark 0.00 out of 1.00

Which data structure is used for memory page replacement algorithms?

- a. Linked List
- b. Hash Table
- c. Queue
- d. Stack