Started on	Thursday, 12 June 2025, 2:51 PM
State	Finished
Completed on	Thursday, 12 June 2025, 3:00 PM
Time taken	8 mins 36 secs
Marks	21.00/25.00
Grade	**84.00** out of 100.00

Question 1

Complete

Mark 1.00 out of 1.00

Which of the following causes a memory leak?

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

Question 2

Complete

Mark 0.00 out of 1.00

A TLB (Translation Lookaside Buffer) improves:

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

Question 3

Complete

Mark 1.00 out of 1.00

Copying garbage collectors work by:

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

Question 4

Complete

Mark 1.00 out of 1.00

What kind of memory allocation is used for recursion?

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

Question 5

Complete

Mark 0.00 out of 1.00

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

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

Question 6

Complete

Mark 1.00 out of 1.00

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

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

Question 7

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. Segmentation algorithm
- d. Garbage collection algorithm

Question 8

Complete

Mark 1.00 out of 1.00

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

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

Question 9

Complete

Mark 1.00 out of 1.00

Which memory management technique allows non-contiguous memory allocation?

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

Question 10

Complete

Mark 1.00 out of 1.00

What is a benefit of using dynamic memory allocation?

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

Question 11

Complete

Mark 1.00 out of 1.00

Memory compaction is used to solve:

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

Question 12

Complete

Mark 1.00 out of 1.00

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

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

Question 13

Complete

Mark 1.00 out of 1.00

What is a “dangling pointer”?

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

Question 14

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. Cache misses
- d. Unused memory within allocated blocks

Question 15

Complete

Mark 1.00 out of 1.00

Segmentation differs from paging because segmentation:

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

Question 16

Complete

Mark 1.00 out of 1.00

The heap memory is primarily used for:

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

Question 17

Complete

Mark 0.00 out of 1.00

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

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

Question 18

Complete

Mark 1.00 out of 1.00

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

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

Question 19

Complete

Mark 0.00 out of 1.00

The stack grows:

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

Question 20

Complete

Mark 1.00 out of 1.00

Which data structure is used for memory page replacement algorithms?

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

Question 21

Complete

Mark 1.00 out of 1.00

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

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

Question 22

Complete

Mark 1.00 out of 1.00

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

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

Question 23

Complete

Mark 1.00 out of 1.00

The OS swaps memory pages to disk to:

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

Question 24

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. Allocate memory faster
- d. Prevent memory leaks

Question 25

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. Infinite loop
- d. Unfreed memory