Started on	Thursday, 12 June 2025, 2:52 PM
State	Finished
Completed on	Thursday, 12 June 2025, 3:06 PM
Time taken	14 mins 8 secs
Marks	21.00/25.00
Grade	**84.00** out of 100.00

Question 1

Complete

Mark 1.00 out of 1.00

Copying garbage collectors work by:

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

Question 2

Complete

Mark 1.00 out of 1.00

The heap memory is primarily used for:

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

Question 3

Complete

Mark 1.00 out of 1.00

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

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

Question 4

Complete

Mark 1.00 out of 1.00

Which of the following is a sign of stack overflow?

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

Question 5

Complete

Mark 1.00 out of 1.00

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

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

Question 6

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 7

Complete

Mark 1.00 out of 1.00

A TLB (Translation Lookaside Buffer) improves:

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

Question 8

Complete

Mark 1.00 out of 1.00

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

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

Question 9

Complete

Mark 1.00 out of 1.00

Which memory management technique allows non-contiguous memory allocation?

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

Question 10

Complete

Mark 0.00 out of 1.00

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

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

Question 11

Complete

Mark 1.00 out of 1.00

Which of the following best describes internal fragmentation?

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

Question 12

Complete

Mark 1.00 out of 1.00

Which data structure is used for memory page replacement algorithms?

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

Question 13

Not answered

Marked out of 1.00

What is a “dangling pointer”?

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

Question 14

Complete

Mark 1.00 out of 1.00

Memory compaction is used to solve:

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

Question 15

Complete

Mark 1.00 out of 1.00

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

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

Question 16

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 17

Complete

Mark 1.00 out of 1.00

The stack grows:

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

Question 18

Complete

Mark 1.00 out of 1.00

Segmentation differs from paging because segmentation:

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

Question 19

Not answered

Marked out of 1.00

What is a benefit of using dynamic memory allocation?

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

Question 20

Complete

Mark 1.00 out of 1.00

Which of the following causes a memory leak?

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

Question 21

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 22

Complete

Mark 1.00 out of 1.00

The OS swaps memory pages to disk to:

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

Question 23

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. alloc
- d. calloc

Question 24

Complete

Mark 0.00 out of 1.00

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

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

Question 25

Complete

Mark 1.00 out of 1.00

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

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