**Quiz - Paper 3**

**Instructions**

**- This quiz contains 25 multiple-choice questions.**

**- Select the best answer for each question.**

**- Time allowed: 30 minutes.**

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**1. Output of the following C code snippet:**

int main() {

int x = 5;

printf("%d %d %d\n", x++, ++x, x++);

return 0;

}

* A) 5 7 6
* B) 5 7 7
* C) None of the above
* D) 6 7 7

**2. Identify the issue in this memory allocation code:**

char \*ptr = (char \*)malloc(10);

strcpy(ptr, "VTU Programming Exam");

free(ptr);

* A) Allocates 10 bits instead of bytes
* B) Buffer overflow: allocated 10 bytes but writing more
* C) Typecast to (char \*) is unnecessary
* D) Nothing wrong, the code is perfect (said no C programmer ever)

**3. What is the output of this macro expansion?**

#define SQUARE(x) x\*x

printf("%d", SQUARE(3+2));

* A) Prints 25
* B) Prints 11
* C) Compilation error
* D) Prints 3+2\*3+2

**4. Which C function should NOT be used due to security risks?**

char buffer[10];

\_\_\_\_\_\_\_\_(buffer);

* A) gets()
* B) fgets()
* C) scanf()
* D) strcpy()

**5. Output of the following pointer arithmetic:**

int main() {

int arr[5] = {1, 2, 3, 4, 5};

int \*ptr = arr + 4;

printf("%d %d %d", \*(ptr-2), \*ptr, \*(arr+1));

return 0;

}

* A) 3 5 2
* B) 2 4 1
* C) 3 4 2
* D) Segmentation fault (core dumped)

**6. Translate this student phrase:**

*"My code is seg faulting before submission, prof is gonna yeet me fr fr"*

* A) My code is crashing before submission, the professor will certainly fail me for real
* B) My code is slow before submission, the professor will praise me frequently
* C) My code needed debugging before submission, the professor will grade me fairly
* D) My code is working perfectly before submission, the professor will be impressed

**7. What does it mean when your lab partner says, "We're in the endgame now" at 3 AM?**

* A) You've reached the final, most desperate debugging phase
* B) The program is finally compiling without errors
* C) They've been watching too many Marvel movies
* D) They're planning to drop the course tomorrow

**8. Professor's feedback: "Your code lacks elegance." What does it mean?**

* A) Your code works but looks like it was written by a sleep-deprived panda
* B) Your code needs more comments
* C) Your code doesn’t use enough pointer arithmetic
* D) Your indentation is inconsistent

**9. What do VTU students actually mean by "I'll start the assignment tonight"?**

* A) "I'll start the assignment 2 hours before the deadline"
* B) "I'll copy it from my friend tomorrow"
* C) "I'm planning to watch YouTube videos about starting the assignment tonight"
* D) All of the above

**10. What does "pulling an all-nighter" for a C programming lab really mean?**

* A) Spent 8 hours debugging one semicolon error
* B) Watched coding tutorials for 2 hours, coded for 20 minutes
* C) Scrolled through Stack Overflow until sunrise
* D) All of the above, in that exact order

**11. True or False: A VTU student has ever completed a C program without printf debugging.**

* A) False - printf is the sacred debugging tool of every VTU student
* B) True - but only because they used scanf debugging instead
* C) True - but they immediately transferred to Commerce
* D) False - the compiler would reject such mythical code

**12. What's the exchange rate between attendance percentage and exam preparation?**

* A) 75% attendance = minimum preparation required to pass
* B) Each 1% below 85% attendance requires 1 additional hour of cramming
* C) Attendance is inversely proportional to coding skills
* D) No amount of last-minute preparation compensates for skipping data structures lectures

**13. What’s the official name for the joy of compiling C code on the first try?**

* A) Compiler Stockholm Syndrome
* B) The Halting Problem Miracle
* C) Dennis Ritchie’s Blessing
* D) A sign you forgot to write half the functionality

**14. Probability of a power cut during C programming lab submission:**

* A) Directly proportional to how close you are to finishing
* B) Inversely proportional to the number of backup generators on campus
* C) 100% if you didn’t save in the last 30 minutes
* D) Always exactly when you're about to press "Submit"

**15. How often does a VTU student regret choosing engineering during memory allocation debugging?**

* A) Once per segmentation fault
* B) Directly proportional to the number of memory leaks
* C) Exponentially increasing as the submission deadline approaches
* D) Constantly, at a rate of 1 regret per minute

**16. Common reason for "It worked on my machine" in VTU lab?**

* A) "I'm using Turbo C++ and you're using GCC"
* B) "My machine uses cosmic rays for compilation"
* C) "I accidentally included my lucky charm library"
* D) "My computer has learned to correct my mistakes"

**17. First response when your C program crashes in the external exam?**

* A) Look hopefully at the examiner
* B) Blame the compiler version
* C) Quickly add 50 more printf statements
* D) Question your career choices

**18. Relationship between code commenting and correctness in VTU assignments?**

* A) Perfectly commented code that doesn’t actually work
* B) Working code with nonsensical comments
* C) No comments and barely working code
* D) Comments explaining why the code doesn’t work instead of fixing it

**19. VTU definition of "code optimization":**

* A) "I removed all the variables I didn’t understand"
* B) "I made it 1% faster and 200% harder to understand"
* C) "I copied it from a different GitHub repo than my friends"
* D) "I deleted all the comments to make it look mysterious"

**20. What does "I understood the linked list assignment" actually mean?**

* A) "I can draw pictures of linked lists but can’t code them"
* B) "I copied it but changed the variable names"
* C) "I watched three YouTube tutorials and still don’t get it"
* D) All of the above

**21. How do VTU students typically debug pointers?**

* A) Print the memory address and stare at it until it makes sense
* B) Add & and \* randomly until it works
* C) Ask the lab assistant who gives an explanation more confusing than the bug
* D) All of the above, in increasingly desperate succession

**22. Best way to check if your recursive function works?**

* A) Run it and see if your computer crashes
* B) Count the number of recursive calls on your fingers
* C) Hope it terminates before the lab session ends
* D) Write it iteratively instead and pretend you understand recursion

**23. Best way to ensure your C code passes VTU practical exam?**

* A) Write test cases for every possible input
* B) Memorize expected output from lab manual examples
* C) Practice explaining how it works even when it doesn’t
* D) Master the art of confidently pointing at random lines of code

**24. Most reliable way to fix a complex bug?**

* A) Explain it to a non-CS roommate
* B) Restart the computer and hope
* C) Copy a different solution
* D) Add unnecessary variables until the compiler gives up

**25. True or False: /\* Will fix before submission \*/ means you’ll actually fix it.**

* A) False - it’s a historical record of good intentions
* B) True - after 17 worse fixes
* C) True - if deadline is extended
* D) False - it's a coded plea for help