

Quiz 2

The Art of Computer Programming

29 September 2025

Full name:

You have 10 minutes to answer this quiz, directly on this sheet of paper. No electronic devices or material of any kind is allowed. Do not forget to add your name above. Every question amounts to 2 points; the quiz is graded out of 10 points.

Questions

Q1. Circle the correct answer. Structured programming organizes code with:

- a. Sequences and `goto` statements
- b. Sequences, tests, loops, and functions
- c. Objects, methods, and events
- d. Generic and logic programming

Q2. In C, what is the output of the following code?

```
int x = -3;
if (x > 0) {
    printf("positive");
} else {
    printf("non-positive");
}
```

Answer:

Q3. In Python, what is the output of the following code?

```
for i in range(2, 10, 2):
    print(i, end=" ") # end=" " means a space is added after each print
                    # instead of a line break
```

Answer:

Q4. In C, consider the function call below:

```
void add_one(int *p) {
    *p = *p + 1;
}
int main(void) {
    int a = 5;
    add_one(&a);
    printf("%d\n", a);
    return 0;
}
```

What is printed?

Q5. Write either the recursive or the imperative definition of a function `fact` computing the factorial `fact(n)` of a number `n` in Python.