

FINAL EXAMINATION: C PROGRAMMING

Class: XI/XII | Duration: 3 Hours | Max Marks: 70

General Instructions:

- All questions are compulsory.
- Section A: 20 MCQs (1 Mark each). Answer in the box provided.
- Section B: 10 Short Answer Questions (2 Marks each).
- Section C: 6 Long Answer Questions (5 Marks each). Attempt any 5.
- Write clear and commented code where necessary.

SECTION A: Multiple Choice Questions (20 x 1 = 20 Marks)

1. Which of the following is not a valid data type in C?
 - A. int
 - B. char
 - C. float
 - D. decimal
2. What is the correct format specifier to print a float value?
 - A. %d
 - B. %f
 - C. %c
 - D. %s
3. Which header file is required to use printf() and scanf()?
 - A. #include<header.h>
 - B. #include<stdio.h>
 - C. #include<conio.h>
 - D. #include<math.h>
4. What is the result of $10 \% 3$ in C?
 - A. 3
 - B. 1
 - C. 0

D. 3.33

5. Which symbol is used for a single-line comment in C?

- A. //
- B. /*
- C. */
- D. #

6. Which of the following is a logical AND operator?

- A. &
- B. &&
- C. ==
- D. !

7. The int main() function returns which type of value?

- A. void
- B. int
- C. float
- D. char

8. Which operator has the highest precedence in C?

- A. +
- B. ==
- C. !
- D. *

9. How many times will a 'do-while' loop execute at least?

- A. 0
- B. 1
- C. Infinity
- D. Depends on condition

10. Which keyword is used to stop a loop iteration?

- A. continue
- B. exit
- C. break
- D. halt

11. What is the size of an 'int' variable in standard C?

- A. 1 byte
- B. 2 bytes
- C. 4 bytes
- D. Depends on compiler

12. What is 0 in C?

- A. Integer
- B. String
- C. Character
- D. Null

13. Which of the following is a valid variable name?

- A. 1st_var
- B. my_var1
- C. int
- D. float-var

14. Which function clears the terminal screen?

- A. clrscr()
- B. clear()
- C. cls()
- D. system('clear')

15. What is the purpose of the \n escape sequence?

- A. New Tab
- B. New Line
- C. New Page
- D. Backspace

16. Which relational operator means 'not equal to'?

- A. !=
- B. <>
- C. ==
- D. !

17. Identify the ternary operator.

- A. if-else
- B. ?:
- C. for
- D. switch

18. Global variables are declared:

- A. Inside main()
- B. Outside any function
- C. In a header file
- D. Inside loops

19. What is the default value of a global integer variable?

- A. Garbage
- B. 0
- C. 1
- D. NULL

20. Which of these is used to repeat a block of code?

- A. if
- B. switch
- C. while
- D. return

SECTION B: Short Answer Questions (10 x 2 = 20 Marks)

1. Differentiate between a variable and a constant with examples.

2. Explain the significance of the include preprocessor directive.

3. What is the difference between '=' and '==' operators?

4. Write the syntax and use of the 'switch-case' statement.

5. Define a loop. Why is it used in programming?

6. Explain the difference between 'while' and 'do-while' loops.

7. List the format specifiers for int, float, char, and double.

8. What is the role of the 'break' and 'continue' statements?

9. What is recursion? Give a simple example.

10. Explain the importance of the semicolon (;) in C programming.

SECTION C: Long Answer Questions (6 x 5 = 30 Marks)

Attempt any 5 questions.

1. Explain the structure of a C program with a neat diagram and example code.
2. Write a C program to check whether a given number is Even or Odd.
3. Explain data types in C. Differentiate between primitive and derived data types.
4. Write a C program to print the Fibonacci series up to 'n' terms.
5. Describe the various operators in C. Explain Arithmetic and Relational operators in detail.
6. Predict the output of the following code snippet and explain why:

```
int i=0;
while(i<5) {
    printf('%d ', i);
    i++;
    if(i==2) continue;
}
```

ANSWER KEY: SECTION A (MCQs)

- Q1: D
- Q2: B
- Q3: B
- Q4: B
- Q5: A
- Q6: B
- Q7: B
- Q8: D
- Q9: B
- Q10: C
- Q11: D
- Q12: A
- Q13: B
- Q14: A
- Q15: B
- Q16: A
- Q17: B
- Q18: B
- Q19: B
- Q20: C