

Section A

Q.-1. Respond to any three of the following questions in brief. (30)

- (1) Explain different types of errors in C programming and describe the debugging process in detail.
- (2) Define constants and variables in C. Explain different types of constants with suitable examples.
- (3) Describe the rules for naming variables in C and explain the concept of identifiers and keywords with examples.
- (4) Explain arithmetic operators in C. Discuss their precedence and associativity rules with examples.
- (5) Describe relational and logical operators in C. Explain how they are used in decision making.

Section B

Q.-2. Write short notes on any four of the following topics. (20)

- (1) Discuss nested loops in C programming. Explain their working and applications with examples.
- (2) Explain two-dimensional arrays in C. Describe matrix representation and operations with suitable examples.
- (3) Explain string handling in C programming. Describe different string functions with examples.
- (4) Describe function declaration, definition, and calling mechanism in C with suitable examples.
- (5) Describe dynamic memory allocation in C. Explain malloc(), calloc(), realloc(), and free() functions.
- (6) Explain memory management issues in C programming and how dynamic memory allocation helps to overcome them.

Section C

Q.-3. Multiple Choice Questions. (10)

(1) Which language uses only 0s and 1s?

- | | |
|-------------|---------------|
| A) Assembly | B) High-level |
| C) Machine | D) C |

(2) Execution of a C program starts from

- | | |
|------------|----------------|
| A) main() | B) function1() |
| C) start() | D) header() |

(3) Which constant is enclosed in single quotes?

- | | |
|------------|--------------|
| A) String | B) Character |
| C) Integer | D) Floating |

(4) Which is a valid variable name?

- | | |
|------------|-----------|
| A) int | B) 123abc |
| C) abc_123 | D) a+b |

(5) Which operator is unary?

- | | |
|-------|------|
| A) + | B) * |
| C) ++ | D) / |

(6) Which operator is used to assign value?

- | | |
|-------|-------|
| A) == | B) = |
| C) <= | D) >= |

(7) printf() belongs to which category?

- | | |
|----------|-----------|
| A) Input | B) Output |
| C) File | D) String |

(8) Which escape sequence moves cursor to new line?

- | | |
|-------|-------|
| A) \t | B) \b |
| C) \n | D) \r |

(9) Which function reads formatted input?

- | | |
|------------|-------------|
| A) scanf() | B) printf() |
| C) getch() | D) puts() |

(10) Input-output functions are defined in

- | | |
|------------|-------------|
| A) conio.h | B) math.h |
| C) stdio.h | D) string.h |

Section D

Q.-4. Decide whether the statements given below are True or False.

(10)

- (1) C language is a high-level language only.
- (2) Execution of a C program starts from main() function.
- (3) Global variables are declared inside functions.
- (4) Comments are ignored by the compiler.
- (5) Integer constants contain decimal points.
- (6) Character constants are enclosed in single quotes.
- (7) Logical AND operator in C is &&.
- (8) Assignment operator is used to compare two values.
- (9) Bitwise operators work on individual bits.
- (10) Comma operator can be used in for loop.