

2023

COMPUTER PROGRAMMING IN C
COMPUTER TECHNIQUE (Paper - II)
(Vocational Stream : Theory)

Full Marks : 100

Time : 3 hours

The figures in the margin indicate full marks for the questions
General Instructions :

- (i) Write all the answers in the Answer Script
- (ii) Attempt Part — A Objective Questions serially
- (iii) Attempt all parts of a question together at one place

(PART : A — OBJECTIVE)

(Marks : 50)

SECTION – I

- 1.** Fill in the blanks from the list of words/phrases given at the end: 1×20 = 20
- (a) The specification %[] is used for reading strings that contain _____ .
 - (b) By default, the real numbers are printed with a precision of _____ decimal places.

9. (a) What is the process to create increment and decrement in C? 3
- (b) What is the explanation for prototype function in C? 3
10. (a) What is a nested loop? Explain. 3
- (b) Describe the header file and its usage in C programming. 3

UNIT-III

11. (a) What is the general form of function in C? 4
- (b) What is a pointer on a pointer in a C programming language? 3
12. What is a structure? Explain with the help of suitable example. 3 + 4 = 7
13. Explain the use of function toupper() with an example code? 7

UNIT – IV

14. Write short note on the following : 3 + 3 = 6
- (a) 'fprintf ()' function
- (b) 'fscanf()' function

- (l) The function strcat() has _____ parameters.
- (m) To use the function atoi in a program, we must use the header file _____ .
- (n) The function _____ is used to determine the length of a string.
- (o) 'printf 'may be replaced by _____ functions for printing strings.
- (p) A variable declared inside a 'function call' are called _____ variable.
- (q) By default _____ is the return type of a C function.
- (r) In passing by pointers the variable of the formal parameter must be prefixed with _____ to their declaration.
- (s) A function that calls itself is known as a _____ function.
- (t) A variable declared inside a function by default assumes _____ storage class.

List of Phrases/words/commands :

Global	n+1	subscripted	recursive	2(two)	Static
Run-time	Local	&	int	2D	Or
char	Auto	*	infinite	n-1	Multidimensional
default	Six	conditional	S	ctype.h	White space Character
scanf	stdlib.h	and	Break	3D	Continue
array	Realtime	Puts	strlen	printf	

3. Choose and write the correct option: $1 \times 5 = 5$

(a) Which of the following is not a valid C variable declaration?

- (i) int number;
- (ii) float rate;
- (iii) int variable_count;
- (iv) int \$main;

(b) Who is the father of C language?

- (i) Steve Jobs
- (ii) James Gosling
- (iii) Dennis Ritchie
- (iv) Rasmus Lerdorf

(c) All keyword in C are in ____

- (i) Lowercase letter
- (ii) Uppercase letter
- (iii) Sentence case letter
- (iv) None of the above

(d) What is an example of iteration in C?

- (i) 'for'
- (ii) 'while'
- (iii) 'do-while'
- (iv) All of the above

(e) What is #include<stdio.h>?

- (i) Inclusion directive
- (ii) Preprocessor directive
- (iii) File inclusion directive
- (iv) None of the above

4. Write the following in not more than 4 to 5 sentences each (*Any five*) : $3 \times 5 = 15$

- (a) Algorithm
- (b) Type casting
- (c) System software
- (d) Interpreter
- (e) Bitwise operator
- (f) String variables
- (g) Flow chart
- (h) Constant
- (i) What is 'member' in structure?

(4)

2. State whether the following statements are *True* or *False*:
 $1 \times 10 = 10$

- (a) C programs are converted into machine language with the help of a program called editor.
- (b) #define is known as preprocessor compiler directive.
- (c) A data file in c language open in writing already exists its contents would be overwritten.
- (d) A 'switch' statement can not always be replace by a series of 'if...else' statements.
- (e) The type of all elements in an array must be the same.
- (f) A 'char' type variable can not be used as a subscript in an array.
- (g) In C language by default the first subscript is zero.
- (h) A program stops its execution when a 'break' statement is encountered.
- (i) The 'default' case is required in the 'switch' statements.
- (j) One if can have more than one 'else' clause.

(7)

SECTION – II

(PART : B – DESCRIPTIVE)

(Marks : 50)

Answer ANY TWO questions from *each* UNIT

UNIT– I

- 5. What are the basic datatype in C language? Explain with example. 6
- 6. Write short notes on the following : $3 + 3 = 6$
 - (a) The comma operator
 - (b) The 'sizeof' operator
- 7. What are the 'entry controlled loop' and 'exit controlled loop'? Explain with its syntax. 6

UNIT– II

- 8. (a) What is an escape sequence? 3
 - (b) What is a 'scanf' function in C language? Explain with example. 3

(2)

- (c) The _____ operator is true only when both the operands are true.
- (d) The _____ statement when executed in a switch statement causes immediate exit from the structure.
- (e) The ternary conditional expression using the operator?: could be easily coded using _____ statement.
- (f) In an exit-controlled loop, if the body is executed n times, the test condition is evaluated _____ times.
- (g) The _____ statement is used to skip a part of statements in a loop.
- (h) A 'for' loop with the no test condition is known as _____ loop.
- (i) The variable used as a subscript in an array is popularly known as _____ variable.
- (j) An array can be initialized either at compile time or at _____ .
- (k) An array that uses more than two subscript is referred to as _____ array.

(9)

- 15. (a) What is the purpose of Sqrt() function? 3
- (b) Write the purpose of feof() function. 3
- 16. (a) What are function prototype? What are their purpose? 3
- (b) What are arguments? Give example. 3

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