

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-I & II(NEW) EXAMINATION – SUMMER 2023

Subject Code:2110003

Date:03-08-2023

Subject Name:Computer Programming And Utilization

Time:10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Question No. 1 is compulsory. Attempt any four out of remaining Six questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

| Q.1 | Objective Question (MCQ)                                                                                              | Mark |
|-----|-----------------------------------------------------------------------------------------------------------------------|------|
| (a) |                                                                                                                       | 07   |
| 1.  | Which of the following is an input device?<br>(A) Monitor (B) Keyboard (C) CPU (D) Printer                            |      |
| 2.  | Which of the following is a type of system software?<br>(A) MS WORD (B) OS (C) C Language (D) MS OFFICE               |      |
| 3.  | Which of the following is not a basic data type?<br>(A) int (B) char (C) void (D) array                               |      |
| 4.  | Which of the following is user defined data type?<br>(A) enum (B) double (C) structure (D) pointer                    |      |
| 5.  | Which of the following is not a valid C language keyword?<br>(A) int (B) void (C) float (D) array                     |      |
| 6.  | Which of following is volatile memory?<br>(A) RAM (B) ROM (C) HDD (D) FLASH                                           |      |
| 7.  | Which of the following is valid variable name><br>(A) double (B) name (C) student name (D) 1_name                     |      |
| (b) |                                                                                                                       | 07   |
| 1.  | How many times will the given loop run?<br>for(i=0; i>10; i++) { printf ("%d", i) ;}<br>(A) 8 (B) 9 (C) 10 (D) 11     |      |
| 2.  | Which library function is used to find length of given string?<br>(A) strcpy() (B) strlen() (C) strcat() (D) strcmp() |      |
| 3.  | Which of the following function writes data into a file?<br>(A) fscanf() (B) fseek() (C) fprintf() (D) fgetc()        |      |
| 4.  | Which function reallocates memory?<br>(a) realloc() (B) malloc() (C) calloc() (D) dealloc()                           |      |
| 5.  | Which of the following symbol is used for logical AND operator in C language?<br>(A) & (B) && (C)   (D)               |      |
| 6.  | If x = 7 then what is the value of ++x ?<br>(A) 6 (B) 7 (C) 8 (D) 9                                                   |      |
| 7.  | Which of the following is used as a string termination character in C ?<br>(A) 0 (B) \0 (C) \$ (D) NULL               |      |

|            |            |                                                                                                                                                                                                                           |           |
|------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Q.2</b> | <b>(a)</b> | Explain basic block diagram and functions of various components of computer.                                                                                                                                              | <b>03</b> |
|            | <b>(b)</b> | Draw flowchart to find out maximum number out of three numbers.                                                                                                                                                           | <b>04</b> |
|            | <b>(c)</b> | Explain various operators in C language.                                                                                                                                                                                  | <b>07</b> |
| <b>Q.3</b> | <b>(a)</b> | Explain fundamental data types in C language.                                                                                                                                                                             | <b>03</b> |
|            | <b>(b)</b> | Compare entry control loop and exit control loop.                                                                                                                                                                         | <b>04</b> |
|            | <b>(c)</b> | Write a program to print Fibonacci series. (1,1,2,3,5,.....N)                                                                                                                                                             | <b>07</b> |
| <b>Q.4</b> | <b>(a)</b> | Explain difference between call by reference and call by value                                                                                                                                                            | <b>03</b> |
|            | <b>(b)</b> | Explain following string functions :(1) strcpy( ), (2) strcat( ), (3) strlen( ) , (4) strcmp ( )                                                                                                                          | <b>04</b> |
|            | <b>(c)</b> | Write a program to arrange N numbers of an array in ascending order                                                                                                                                                       | <b>07</b> |
| <b>Q.5</b> | <b>(a)</b> | What is a pointer? Explain initialization of a pointer in details.                                                                                                                                                        | <b>03</b> |
|            | <b>(b)</b> | Explain one dimensional array with example                                                                                                                                                                                | <b>04</b> |
|            | <b>(c)</b> | What is recursion? Write C program to find factorial of N using recursive Function?                                                                                                                                       | <b>07</b> |
| <b>Q.6</b> | <b>(a)</b> | Explain difference between structure and union.                                                                                                                                                                           | <b>03</b> |
|            | <b>(b)</b> | Explain break and continue statement with example                                                                                                                                                                         | <b>04</b> |
|            | <b>(c)</b> | Define a structure person, that would contain person name, date of joining and salary. Using this structure, write a program to read this information for one person from the key board and print the same on the screen. | <b>07</b> |
| <b>Q.7</b> | <b>(a)</b> | Explain dynamic memory allocation.                                                                                                                                                                                        | <b>03</b> |
|            | <b>(b)</b> | What is string? Explain gets() and puts() functions with example                                                                                                                                                          | <b>04</b> |
|            | <b>(c)</b> | What is File Management? Explain various file management functions?                                                                                                                                                       | <b>07</b> |

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