GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–I &II (NEW) EXAMINATION – SUMMER-2019

Subject Code: 2110003   **Date: 10/06/2019**

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.

Q.1   **Mark**

(a) **Objective Question (MCQ)**   **07**
1. Which is output device?
   - (a) Barcode Reader
   - (c) Scanner
   - (b) LCD
   - (d) Keypad

2. C-Language is _____.
   - (a) Machine Dependent
   - (c) Machine Independent
   - (b) Partially Machine Dependent
   - (d) None of above.

3. Which one of following is volatile memory?
   - (a) SRAM
   - (c) Flash
   - (b) EPROM
   - (d) Hard disk

4. How many times following loop will be rotated?
   ```
   int a = 10,  b = 1;
   while(a>b)
   {  a--;  b++; }
   ```
   - (a) 5
   - (c) 4
   - (b) 10
   - (d) 1

5. Which of the following is correct C statement to print variable a?
   - (a) printf("a");
   - (c) printf("%d");
   - (b) printf("%d", a);
   - (d) printf("%a");

6. Which one of following loop rotates infinite time?
   - (a) for(; ;)
   - (d) only a and c
   - (b) do { …. } While(1<10);
   - (e) all of a, b, c
   - (c) while (100)

7. Switch case statement cannot be applicable on _____ data type.
   - (a) int
   - (c) enumerated
   - (b) char
   - (d) float

(b) **Objective Question (MCQ)**   **07**
1. Which one is invalid variable name?
   - (a) int_a
   - (c) case_c
   - (b) temp1
   - (d) 1temp

2. Which one of following statement doesn't increment variable a?
   - (a) a++
   - (c) ++a
   - (b) a += 1
   - (d) a = +1

3. For following code, what should be value of X and Y?

```
M = 9;  N = 10;
X = M && N;
Y = M & N;
```

    (a) X = 1, Y = 8   (c) X = 1, Y = 1
    (b) X = 8, Y = 8   (d) None of above

4. What is output of following program ?

```
void main( )
{
   int z = 10;
   float z  = 10;
  printf("%d",z);
}
```
    (a) 10.00   (c) 10
    (b) Compile time error   (d) Run time error

5. The Function _____ obtains block of memory run time.
    (a) malloc()   (c) calloc()
    (b) Both malloc() and calloc()   (d) free()

6. Which of the following is true about FILE *fp
    (a) FILE is keyword in C for representing files and fp is variable of
        FILE type.
    (b) FILE is a structure and fp is pointer to structure of FILE type.
    (c) FILE is stream
    (d) FILE is buffered stream

7. Array and Structure can contain elements of _____ and _____ data
type respectively.
    (a) same, different   (c) same, same
    (b) different, Same   (d) different , different

Q.2	**(a)**	Define (1) Higher Level Language (2) Lower Level Language (3) Machine Level Language	**03**
	(b)	Sketch flowchart to convert seconds into hour, minute and second. (Hint : 3700 seconds => 1 hr , 1 minute , 40 second)	**04**
	(c)	Describe assignment, sizeof( ) and ternary operator with example.	**07**
Q.3	**(a)**	Write C program to find area and perimeter of rectangle.	**03**
	(b)	Describe Enumurated data type with example.	**04**
	(c)	Write C program to get 20 data from user. Find sum, average, maximum and minimum number.	**07**
Q.4	**(a)**	Write a program to add first n numbers. Get value of n from user.	**03**
	(b)	Describe switch case statement with example.	**04**
	(c)	Write a C program to display given pattern	**07**

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Q.5 **(a)** Describe dynamic memory allocation. Give advantages and disadvantages of it. **03**

(b) Describe break and continue statement with suitable example. **04**

(c) Write a C program to do following task. **07**
    (1) Take string from user and print in upper-case
    (2) Find string length without using strlen() function.

Q.6 **(a)** Give merits and demerits of Union over structure. **03**

(b) Design structure with following elements : **04**
Name of employ, basic, da, ta , deduction , net_salary
Give the variety of way to access individual elements of structure..

(c) Describe types of function based on arguments and return type. **07**

Q.7 **(a)** Describe following file handling functions. **03**
    (1) fopen()
    (2) fseek()
    (3) fgetc()

(b) Write C program to copy content of file "D:\home\avs.txt" into new text file "ftel.txt" in E drive . **04**

(c) Define Pointer. How to initialize integer pointer ? Describe pointer to array with example. **07**

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