

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-1/2 (NEW) EXAMINATION – WINTER 2017

Subject Code: 2110003

Date: 05/01/2018

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	Objective Question (MCQ)	Mark
(a)		07
1.	Which one is an input device? a) Monitor b) Printer c) Mouse d) Plotter	
2.	Which the following is an application software? a) Compiler b) MS Word c) Assembler d) Interpreter	
3.	What is the value of expression $4/9$ in C? a) 1 b) 0 c) 0.444 d) Error	
4.	A declaration <code>float a, b;</code> occupies how much memory? a) 2 bytes b) 4 bytes c) 8 bytes d) 16 bytes	
5.	To round off <code>x</code> , which is a float, to an int value, which one is correct? a) <code>y = (int)(x+0.5);</code> b) <code>y = int(x+0.5);</code> c) <code>y = (int)x+0.5;</code> d) <code>y = (int)((int)x+0.5);</code>	
6.	What is the output of following C code? <pre>int k; for(k=1;k<=10;k++); printf("Hello");</pre> a) prints "Hello" 10 times b) prints nothing c) prints "Hello" infinite times d) prints "Hello" 1 time	
7.	What is the output of <code>16>>2</code> ? a) 4 b) 32 c) 8 d) 64	
(b)		07
1.	Which one is the correct syntax of for loop? a) <code>for(initialization,condition,increment/decrement)</code> b) <code>for(initialization;condition;increment/decrement)</code> c) <code>for(condition,condition,increment/decrement)</code> d) <code>for(condition;initialization;increment/decrement)</code>	
2.	What is the output of following code: <pre>void main() { enum day{Mon,Tues,Wed,Thu,Fri,Sat,Sun}; printf("%d",Fri); getch(); }</pre> a) 5 b) Error c) 4 d) Fri	

3. Which function should be used to release allocated memory which is not needed?

- a) dealloc ()
- b) free ()
- c) release ()
- d) unalloc ()

4. What is the output of following C code?

```
int main()
{
int *ptr, a = 10;
ptr = &a;
*ptr += 1;
printf("%d,%d/n", *ptr, a);
}
```

- a) 10,10
- b) 10,11
- c) 11,10
- d) 11,11

5. Break statement is used for

- a. Quit a program
- b. Quit the current iteration
- c. Both a and b
- d. None of the above

6. Which function is used to put the file pointer at the desired location in the file?

- a) fseek()
- b) rewind()
- c) ftell()
- d) fptr()

7. Which data type allows storage of same data type?

- a) Array
- b) Union
- c) Void
- d) both a and b

- Q.2** (a) Draw a flowchart to find out smallest number from given three numbers. **03**
- (b) List and explain fundamental data types of 'C' language. **04**
- (c) Explain basic structure of C program. **07**

- Q.3** (a) Write a program to find out an area of a circle **03**
- (b) What is type conversion? List and explain type conversion supported by C language with example. **04**
- (c) Explain following operators used in C language. **07**
 - 1) Logical
 - 2) Increment/Decrement
 - 3) Bitwise
 - 4) Relational

- Q.4** (a) Write a program to print multiplication table of any number. **03**
- (b) What is Array in C language? How is it different from Structure in C language? State advantages and disadvantages of Array. **04**
- (c) Write a program to display given pattern **07**

```
*
# #
* * *
# # # #
* * * * *
# # # # #
* * * * * *
```

- Q.5** (a) Explain Entry Controlled Loop and Exit Controlled Loop with flowchart. **03**
- (b) Write a program to check whether a given string is palindrome or not. **04**
- (c) Explain following string manipulation functions. **07**
strcmp(), strlen(), strcat(), strstr()

- Q.6** (a) Differentiate Structure vs. Union **03**
- (b) What is Recursion? Write a program to find factorial of a given number. **04**
using recursion.

(c) What is function? Explain the function definition, function prototype and function call with relative example. **07**

- Q.7**
- (a) Explain fopen () and fclose () file handling functions **03**
 - (b) Write a **program** to print the **program** itself. **04**
 - (c) What is Pointer in C? Explain its advantages. Also write a program to swap two elements using pointer. **07**
