C.U.SHAH UNIVERSITY
Summer Examination-2017

Subject Name: Fundamentals in Computer Programming

Subject Code: 4TE01FCP1   **Branch: B.Tech (All)**

Semester: 1   **Date: 30/03/2017**   **Time: 10:30 To 01:30**   **Marks: 70**

Instructions:
(1) Use of Programmable calculator & any other electronic instrument is prohibited.
(2) Instructions written on main answer book are strictly to be obeyed.
(3) Draw neat diagrams and figures (if necessary) at right places.
(4) Assume suitable data if needed.

Q-1		**Define the following terms:**	
	a)	Computer	**(1)**
	b)	Hardware	**(1)**
	c)	Software	**(1)**
	d)	Operating System	**(1)**
	e)	Algorithm	**(1)**
	f)	Program Control Structure	**(1)**
	g)	Compiler	**(1)**
	h)	Assembler	**(1)**
	i)	Operator	**(1)**
	j)	Type Conversion	**(1)**
	k)	Symbolic Constant	**(1)**
	l)	Overflow of Data	**(1)**
	m)	Pointer	**(1)**
	n)	Storage Class	**(1)**

Attempt any four questions from Q-2 to Q-8

Q-2		**Attempt all questions**	
	a)	Explain importance of 'C' in details.	**(5)**
	b)	Write a C program to swap two numbers using third variable.	**(5)**
	c)	Draw a flowchart and algorithm to find average of three subjects.	**(4)**

Q-3		**Attempt all questions**	
	a)	Write short note on Basic structure of C program.	**(5)**
	b)	Write a C program to print the reverse number of given number.	**(5)**
	c)	Explain implicit type conversion and explicit type conversion	**(4)**

Q-4   **Attempt all questions**

a) What do you mean by C token? Explain each token in details. **(5)**

b) Write a C program for simple calculator using switch statement. **(5)**

c) Differentiate Entry-Controlled loop and Exit-Controlled loop. **(4)**

Q-5   **Attempt all questions**

a) Explain various operators available in C programming. **(5)**

b) Write a C program to generate fibonacci series upto n numbers. **(5)**

c) What do you mean by recursion? Explain with suitable example. **(4)**

Q-6   **Attempt all questions**

a) Explain one dimensional array with suitable example. **(5)**

b) Write a C program to check whether the given number is prime or not. **(5)**

c) Difference between structure and union. **(4)**

Q-7   **Attempt all questions**

a) Explain category of user defined function with suitable example. **(5)**

b) Write a C program to find whether a given sting is palindrome or not. **(5)**

c) Explain bit-field with suitable example. **(4)**

Q-8   **Attempt all questions**

a) What is DMA? Explain malloc(), calloc(), realloc() and free() function with suitable example. **(5)**

b) What is the command line argument in C programming **(5)**

c) Explain chain of pointer with suitable example. **(4)**