CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY
First Semester of B. Tech (CE/IT/EC) Examination
June 2017
CE141 / CE103 Computer Concepts & Programming

Date: 08.06.2017, Thursday	Time: 01:30 p.m. To 04:30 p.m.	Maximum Marks: 70

Instructions:
1. The question paper comprises two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION – I

Q – 1 a Match the following.   [05]

	Column A		Column B
i)	for loop	A)	One of the Operator
ii)	int	B)	Entry control loop
iii)	sizeof()	C)	Unconditional jump statement
iv)	goto	D)	Basic Data Type
v)	isupper()	E)	Identifier
		F)	Test character is in uppercase letter or not

Q – 1 b Find whether the following variable name is Valid or Invalid.   [02]

i)   1Number   ii)   float
iii) SUM   iv)   N1+N2

Q – 2 a What is software? List out various categories of software.   [02]

OR

Q – 2 a Differentiate : Compiler and Interpreter   [02]

Q – 2 b List out six sections of Basic C program.   [03]

Q – 2 c **Answer *three* Questions.**   [09]

i)   Write a short note on primary Data Types used in C.

ii)   Compare: scanf(), getchar() and gets().

iii) Explain Nesting of if..else statement with suitable example.

iv)   Briefly introduce Implicit Type conversion and Explicit Type conversion.

Q - 3   **Answer the following.**

a.   List out all categories of Operators in C.   [04]

b.   Write a program to find sum of 1 to 100 numbers using any loop and print the sum.   [05]

c.   Write a program to find out minimum of three number using else..if ladder.   [05]

OR

Q - 3   **Answer the following.**

a.   Explain any four string handling functions in C.   [04]

b.   Write a program to read two 3 X 3 matrices from the user and store the addition of two   [05]
     matrices in resultant matrix. i.e. c [3][3] = a[3][3] + b[3][3]

c. List out all categories of function in C. Write a program to find whether the entered number is zero or not using any category of function.   [05]

SECTION – II

Q - 4 Answer the question below.

a. What is union?   [01]

b. **Match the following.**   [04]

Column A		Column B	
i)	free()	A)	Writes a character to a file
ii)	putw()	B)	Sets the position to a desired point in the file
iii)	fseek()	C)	Allocates request size of bytes at run time
iv)	malloc()	D)	Frees previously allocated memory
		E)	Writes an integer to a file

c. Every string ends with _____ character.   [01]

d. **State True or False:**   [01]
isalnum(c) checks whether c is an alphanumeric character or not.

Q – 5 a Differentiate call by value and call by address with example.   [05]

OR

Q – 5 a What is the importance of file handling? Explain file handling functions fprintf(),   [05]
rewind() and fopen() with basic modes of opening a file in C.

Q – 5 b Provide two major differences between the following.   [04]

   i) Global variable and Local variable
   ii) while loop and do...while loop

Q – 5 c What is algorithm? What is flowchart? Draw the flowchart to find whether given number   [05]
is odd or even.

OR

Q – 5 c What is pointer? How pointers are declared and initialized? Write down advantages of   [05]
pointer.

Q – 6 a i) Write a short note on nested Structure with example.   [03]

   ii) Define Array. Explain Types of Array.   [04]

Q – 6 b Write a program to find length of given string without using string handling function.   [03]

Q – 6 c Vowel characters are five out of 26 characters of English language, they are 'a', 'e', 'i',   [04]
'o' and 'u'. Other characters are consonant. Write a program to check whether the
entered character is Vowel or consonant using switch case statement.

OR

Q – 6 a i) Write difference between Dynamic Memory Allocation and Static Memory   [03]
Allocation.

ii)   What is recursive function? Explain with suitable example.   [04]

Q – 6 b   Write a program which adds two integer numbers using pointers only.   [03]

Q – 6 c   Define a Structure player having data members: name, country, runs, no of matches and   [04]
age. Write a program to enter data for 10 cricketers and print the details of all the players
having age less than 31 years.

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