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SUBJECT CODE = CSE022105

Roll No. of candidate

2017

End Semester B.Tech (CSE) Examination

1st Semester

INTRODUCTION TO COMPUTERS & PROGRAMMING IN C

Full Marks- 70   Pass Marks- 21   Time- 3 hours

The figures in the margin indicate full marks.

PART – A

Q.1. Answer all questions: **(16 x 1 = 16)**

a) What is a flowchart?
b) What are datatypes?
c) What are relational operators?
d) What is an identifier ?
e) Write the general form of "if-else" statement.
f) What is the meaning of "default" in a switch-case statement?
g) What are loops in C programming?
h) Write the general form of "do-while" loop.
i) Before using an array, its type and dimension must be declared. (True/False).
j) Define 2D array.
k) What is a string?
l) What does strlen() and strcat() mean?
m) Write the general format of Function declaration.
n) Define Structure.
o) What is a pointer?
p) How to access the members of a structure?

PART – B

Q.2. Answer all questions: **(3.5 x 4 = 14)**
a) Explain Nested if-else and draw the flowchart.
b) Define Row Major and Column Major orders of 2D arrays.
c) What is Function definition? Write its syntax.
d) Write a simple C program to copy a string by using inbuilt function strcpy().

PART – C

Q.3. Write a C program to perform addition, subtraction, division, multiplication and modulo division on two integer numbers and two floating point numbers.

OR

Write a C program to print the ASCII value of a character in upper case and then convert the character to lower case and print it.

Q.4. Write a C program to find the largest number and smallest number in an array.

OR

Consider a 20x5 2D array "marks" which has base address = 1000 and number of words per memory location of the array = 2. Now compute the address of the element marks[18][4], assuming that the elements are stored in Row Major Order and Column Major Order.

Q.5. Explain the "Call by value" and "Call by reference" for parameter passing to the Function. Write a C program to calculate the area of a circle using function.

OR

Write a C program to convert the characters of a string to upper case. And later on find the frequency of the characters of a string.

Q.6. Write a C program to read and display the information of 10 students in the class using Structure. The informations are: Roll number, Name, Course, Fees, Date Of Birth, Year of Passing.

OR

Explain the declaration and initialization of a pointer variable and also explain that how to access a variable through its pointer.