

05 TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2070 Chaitra

Exam.	Regular		
Level	BE	Full Marks	80
Programme	All (Except B. Arch)	Pass Marks	32
Year / Part	I / I	Time	3 hrs.

Subject: - Computer Programming (CT401)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ The figures in the margin indicate Full Marks.
- ✓ Assume suitable data if necessary.

1. a) What do you mean by software and explain about generation of programming languages. [4]
b) Define the term "Flowchart". Discuss about different symbols used in Flowchart. [4]
2. a) Find out final value of a, b and c where following expressions are executed sequentially. [4]
 int a = 2, b = 3, c;
 a = (b++) + (++b) + a;
 c = a > b ? a : b;
 b = (a++) + (b--) + a;
 c = c++ * b--;
 b) What are the difference between formatted and unformatted I/O statements? Describe with proper example. [4]
3. a) Explain importance of break and default statements in switch statements. [3]
b) Write a C program to display following pattern using unformatted output statements: [7]
 P
 Pu
 PuL
 PuLc
 PuLcH
 PuLcHo
 PuLcHoW
 PuLcHoWk
4. a) Define "function definition" and write the program to find the sum of two numbers using user-defined functions. [4]
b) What do you mean by "call by value and call by reference" along with suitable example? [4]
5. Can we pass whole array element from function? Write a program to display only those students information which are passed. Use separate function to check the result of student. The information of students like Name, Roll No, Address and Marks are passed from main functions and pass to functions using array type arguments. [2+8]

6. a) Explain the use of typedef of keyboard in structures. [2]
 b) Explain the need of nested structure. Write a C program to convert data in BS to data in AD using structure. Use the data difference of current data. [1+5]
 7. a) A pointer variable is used to store address of some other variables, however, we need to specify datatype while declaring a pointer variable. Why? [3]
 b) Briefly explain array of pointers. How are array and pointer related? Give example. [5]
 8. a) Define opening and closing a file along with suitable examples. [4]
 b) Write the program to display the records in sorted order sorting is performed in ascending order with respect to name using data files concept. [4]
 9. a) Compare arithmetic and logical if statements in FORTRAN with suitable example. [4]
 b) Write a FORTRAN program to read $m \times n$ matrix, transpose it and display both the matrices. [8]

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