TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2081 Baishakh

Exam.		Regular(New Course -2080 Batch)	
Level	BE	Full Marks	60
Programme	All (Except BAR)	Pass Marks	24
Year / Part	I / I	Time	3 hrs.

Subject: - Computer Programming *(CT 101)*

✓ 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. Define programming language. Draw a flowchart to find the factorial of a positive integer. [1+3]

2. What are Preprocessor directives in C? What are the basic rules of identifier naming in C? [2+2]

3. Define the shorthand operator in C. Explain the correct order of precedence of arithmetic operators in C. [1+3]

4. Explain different components of the control string in C. [3]

5. a) Differentiate between break and continue in loop. Write a program in C to display the nth term of the Fibonacci series. [Hint: the nth term is a sum of the previous two numbers, where the first two terms are always 0 and 1.] [2+4]

   b) Display the following pattern using the concept of nested loop in C. [3]
   5
   54
   543
   5432
   54321

6. a) What is an array index? Write a program to read values of 1D array and check whether the largest element is even or odd. [1+4]

   b) Write a program to concatenate two strings without using string handling function. [4]

   c) Write a program to read 5 numbers in an array and then use the concept of pointer to display the array elements. [3]

7. a) Write a program in C to reverse a number entered by user using the concept of function with return type and arguments. [4]

   b) Define register storage class in C. Find the HCF of 2 numbers using Recursion in C [Hint: HCF is a number that divides both the numbers exactly]. [1+4]

8. Write a C program to create a structure named BOOK with its members Name and Price. Input 10 records of book. Create a function named maxPrice() which displays the record with maximum price. The entire structure to the function is passed from main. [6]

9. What is the purpose of 'w' and 'a' mode in text file? Write a program in C that creates a structure named VEHICLE with its member year, brandName. Read 'n' number of vehicle information and write it to a file named vehicle.dat. [1+4]

10. What are the short comings of procedure-oriented programming language? Explain the key features of Object-Oriented Programming Language. [1+3]

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