TRIBHUVAN UNIVERSITY
INSTITUTE OF ENGINEERING
Examination Control Division
2080 Baishakh

Exam.	Back		
Level	BE	Full Marks	80
Programme	All (Except BAR and BAS)	Pass Marks	32
Year / Part	I / I	Time	3 hrs.

Subject: - Computer Programming (*CT 401*)

✓ 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) How is an application software different from system software? Explain with examples. [4]

   b) How is code in source file is converted to the executable file? Explain with key steps involved. [4]

2. a) How is constant different than a variable? [2]

   b) Write a C program to read an integer 'd' from the user. If 'd' is the radius of a circular ground in meters, then this program should calculate and display the area of the circle in square meter. [6]

3. What are formatted input/ output functions? Explain each in detail with examples. [2+4]

4. a) Differentiate between library function and user defined functions. Provide relevant examples. [3]

   b) What is a function prototype? Write a C program to find sum of first 10 natural numbers using recursion. [1+4]

5. a) Write a program to read marks of 48 students in a class and display the second highest mark. [5]

   b) How can we copy one string to another string without using any string handling function? [5]

6. What do you mean by array of structure? Write a program to create a structure named "Student" having members Roll, Name, Address and Marks. Use this structure to read the information of 48 students in a class and display the information of only those students whose marks is between 50 and 70. [2+8]

7. What are pointer arithmetic? Explain with example. Write a C program that uses pointer to read m×n matrix from user. Pass it to function that finds the transpose of the matrix. [4+4]

8. a) How is a binary file different than a text file? Write the syntax and use of fseek () and rewind() functions in C. [2+2]

   b) Write a C program to read the name, year_of_release, and language of 3 movies. Save the movie data of all 'English' language movies in a data file. [4]

9. What is the use of FORMAT statement? Explain 1 and F format with example. Write a program in FORTRAN to read a number from user and check whether it is a prime number or not. [4+4]

10. Write short notes on: [2×3]

    a) While and do-while statement
    b) String manipulation in C.

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