POKHARA UNIVERSITY

Level: Bachelor
Programme: BE
Course: Programming in C

Semester: Spring

Year : 2018
Full Marks: 100
Pass Marks: 45
Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Draw block diagram of a digital computer. Explain each component in brief. 7

   b) Define the role of flow chart in efficient program maintenance with its character. Also develop a flow chart to print the Armstrong numbers between 150 to 500. 8

2. a) How can you declare following variables using suitable data types? Mobile phone numbers, address, body temperature, salary. Also explain each memory occupancy size and range. 8

   b) Why you use "continue" and "break" statement in your program? Explain with suitable example program. 7

3. a) Differentiate pre-test and post-test loop. Write a program to generate Fibonacci numbers as per user's choice. 7

   b) Write a program to read a one dimensional array, sort the numbers in ascending order and display sorted numbers. 8

4. a) Write a program to add two 3x3 matrix. Display the sum stored in third matrix. 7

   b) List the major advantages of recursive function. Write a recursive program to generate the 10 terms Fibonacci sequence starting from 2. 8

5. a) What are the advantages of using dynamic memory allocation over static memory allocation? Explain with a suitable example program. 8

   b) How can a function return multiple values? Explain with example. 7

6. a) Write a program to sort N numbers in an array dynamically. 7

   b) What is significance of file pointer in file handling? Consider a following structure 8

Roll. No.	Name	Address	Faculty	Date Of Birth		
				mm	dd	yy

Write a program to create"student.txt" file to store the above records for 100 students. Also display these records of students who are not from Kathmandu.

7. Write short notes on **(Any Two)**: 2×5

   a) Documentation

   b) void pointer

   c) Generation of Computers.