

POKHARA UNIVERSITY

Level: Bachelor
Programme: BE
Course: Programming in C

Semester: Spring

Year : 2019
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) What do you mean by instructions and software? Explain various types of software. 7
- b) Differentiate between algorithm and flowchart. Write an algorithm and flowchart to find the number given by user is divisible by 2, 3 and 6 or not. 8
2. a) Define operator and operand. List the types of operators and explain any five of them. 7
- b) Write a recursive program to raise number X to power n i.e X^n . 8
3. a) Write a program to generate the following pattern by initializing the string at first 7

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- b) Explain the run time and compile time initialization of an array with examples. 8
4. a) Write a program to find the transpose of 4*3 matrix. 7
- b) What do you mean by recursion function? What are the advantages and disadvantages of using recursive functions? Write a program to find where the number is prime or not using user defined function. 8

5. a) Differentiate between static memory allocation and Dynamic Memory Allocation? Explain with a suitable example program. 8
- b) Write a program to pass array element to a function using pointer. 7
6. a) Create a structure for the following data. 7

Emp_id	Emp_Name	Address	Department	Date of Birth		
				mm	dd	yr

And also write a program to input 100 employee records and display whose Department is "Sales".

- 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.

7. Write short notes on: (**Any two**) 2×5
 - a) Pre-processor directives
 - b) Union
 - c) Break and continue statements