

# POKHARA UNIVERSITY

Level: Bachelor Semester – Fall Year : 2009  
Programme: BE Full Marks : 100  
Course: Programming in C 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. Differentiate between Analog and Digital computers. Also draw a block diagram of digital computer. 8  
b. What is an Algorithm and Flowchart? Write an algorithm and draw a flow chart to count positive and negative number in n given numbers. 7
2. a. Write the structure of for loop show how it works with an appropriate example. Compare continue and break statements. 8  
b. What do you mean by local and global variable? Give example of each. List out the different types of logical operators in C. 7
3. Determine the output of the following programs: 5  
a. 

```
void main ( )  
{  
    int m = 100, n = 50;  
    printf ("%d\n", 10+m++);  
    printf ("%d\n", 10+n--);  
    printf ("%d\n", 10+--n);  
}
```

 5  
b. 

```
void main ( )  
{  
    char string [ ] = "HELLO WORLD";  
    int m;  
    for (m = 0; string [m] != '\0';m++)  
    {  
        if(m%2== 0)  
            printf ("%c", string [m]);  
    }  
}
```

```

c. void test (int*a);
    void main ( )
    {
        int x = 50;
        test (&x);
    }
    void test (int*a)
    {
        *a=*a+50
    }

```

4. a. Discuss in detail the differences between “conventional array declaration” and “declaring arrays using pointers”. Justify your answer with examples. 7
- b. Print the following pattern using a C program. Take the string as an input from the user. Write a generic program to accept string of any length. 8
- Example pattern  
If the user input is NEPAL than the output should be as follows:
- ```

1 N
2 E E
3 P P P
4 A A A A
5 L L L L L

```
5. a. What is nested structure? Give example of a nested structure. How a nested structure component is accessed? 5
- b. Differentiate between macro and function with the help of examples. 5
- c. What do you mean by pre-processor directive? Write about the file inclusion directive. 5
6. a. Write a program to read long integer number, count the digit and print it. 5
- b. What are file opening modes? Create a structure for the following data: 10

| ID | Name | Address | Salary | Date of joining |    |    |
|----|------|---------|--------|-----------------|----|----|
|    |      |         |        | dd              | mm | yy |

And write program to input 100 employee, save in emp.dat file of employee who have the address 'pokhara'.

OR

What is a FILE pointer? Write a program to create a structure for customers in a Shop of the following data:

CID, CName, Address, TelNo, Balance

Read 100 customers from a file customer.dat and display the information of the customers who has the balance is greater than Rs 1000.

7. Write short notes on (Any Two):

5×2

- a. Switch statement
- b. Auto and static variables
- c. Escape key sequences
- d. Format specifiers