POKHARA UNIVERSITY

Level: Bachelor | Semester – Fall | Year : 2011
Programme: BE | Full Marks: 100
Course: Programming in C | 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) Write an algorithm for finding greatest number among 'n' numbers. 7

   b) What is an operator? List all operators available in C. Describe three of them. 8

2. a) Why second generation of computer is better than first generation. Differentiate between third generation and forth generation of computer. 8

   b) What are the steps involving during the programming? Explain. 7

3. a) Find out the output: 3

```
main ( )
 {
 int i = 5, j = 4, k = 9 ;
 i = ( i + k)/3+k%(j+i) + j * k% i/2;
 printf (“%d”, i);
 }
```

   b) 4

```
main ( )
 {
 int x = 16,y = 18, z;
 }
 y + = x ++;
 z = ++ x + y++ ;
 x = x + y + z --;
 printf (“ \n x = %d\ny = %d\nz = %d”, x,y,z);
 }
```

   c) 8

```
main ( )
 {
 int i,j,k;
 for (i = 1; i <=3; i + +)
```

```
        for (j = 1; j<=3; j + +)
            for (k = 1; k< =3; k + +)
                printf ( "\n %d%d%d; i, j, k);
    }
```

4. a) What do you mean by selective and repetitive statement? Why do we need break and continue statement. 7

   b) Write a program to find the terms in the given series till the term value is less than 250. 8

   $(1^2+2^2)/3$, $(2^2+3^2)/4$, $(3^2+4^2)/5$,.....

5. a) Give different ways of initialization of arrays. Give the classification of arrays. 5

   b) What is a function? Categorize it in terms of arguments and return value. 5

   c) Write a C program to find the maximum element in an array of N elements. 5

OR

   a) What do you mean by dynamic memory allocation? Explain about memory leak. 7

   b) Write a program to read N numbers dynamically and sort it using function. 8

6. a) What is structure? Explain its components. How can you access the members of a structure? 7

   b) What is the significance of FILE Pointer? Create a structure called Goods that stores Number, price, and PurchaseDate and Qty. Write a program to store the information of 100 Goods into the file called Goods.dat. 8

7. Write short notes on **any two:** 2×5

   a) Pre- processor directives

   b) String handling functions

   c) Union

   d) Dynamic Memory Allocation