

A. D. Patel Institute of Technology
CP101- Computer Programming and Utilization
Internal Test (Semester – II A.Y. 2008-09)

Date: 27/3/2009

Time: 8:00 to 9:00 am

Max. Marks: 20

Q.1 Attempt any two of the following. [6]

(a) Write a program to define an array of 10 elements, read the array from user, and finds the average of array elements.

(b) Write a program to find the result of the following series.

$$sum = 1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \dots + \frac{1}{n^2}$$

(c) Write a program to generate a pattern shown below.

```
3
4 4
5 5 5
6 6 6 6
```

Q.2 Answer the following.

(a) Identify syntax errors from the following program code. [2]

```
#define PI=3.14
main(){
    float area;
    int r = 33000;
    area = PI*r*r
    Printf("Area =%f",area);
}
```

(b) Find the output of the following codes. (Assume that the header files are included). [4]

```
(1) main(){
    int x=2, y=1;
    switch(x){
        case 2: x=1;
                y=x+10;
        case 1: x=0;
                break;
        default:
                x=5;
                y=0;
    }
}
```

```

(2) main(){
    int i=5, j=10;
    k = i++ + ++j;
    i - = 1;
    printf("i=%d, j=%d, k=%d", i, j, k);
}

```

Q.3 Answer the following. (Any four) [4]

- (a) How many bytes are used to store integer data types?
 (1) 1 (2) 2 (3) 3 (4) 4
- (b) Which of the following is a valid numerical constant?
 (1) 65,000 (2) 0x6A (3) 7.7e +7 (4) \$999
- (c) Which of the following header file contains the definition of 'scanf' and 'printf' functions?
 (1) conio.h (2) math.h (3) stdio.h (4) string.h
- (d) Which of the following is not a control statement?
 (1) if-else (2) switch-case (3) for (4) none of these
- (e) Which of the following is not a bitwise operator?
 (1) == (2) << (3) | (4) &

Q.4 Answer any two. [4]

- (a) Explain the use of 'break' and 'continue' with a suitable example.
- (b) Explain the difference between 'while' and 'do-while' loops by giving syntax of each.
- (c) Describe four basic data types. How could we extend the range of values they represent?