

# POKHARA UNIVERSITY

Level: Bachelor

Semester: Spring

Year : 2009

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) Draw a block diagram of digital computer. Explain each unit in brief. 8
  - b) Differentiate between high level and low level programming language. What do you understand by syntax and semantics of a language? 7
2.
  - a) Explain entry controlled and exit controlled loops with examples. 8
  - b) What will be the output of following program 7

```
main()
{
    int sum,a,k,j;
    sum=0
    a=12345;
    while (a!=0)
        {
            j=a%10;
            printf("%d",j);
            if(j%2==0)
                {
                    sum=sum+j;
                }
        }
    print("sum=%d",sum);
}
```
3.
  - a) Trace the output of following program. 7

```
void main()
{
```

```

int x=0, i=0;
for (i=1; i<10; i++)
    { if (i%2 == 0)
        x += i;
      else
        {
            x - - ;
            printf ("%d\t", x);
        }
    }
printf("\nx=%d", ++x);
getch();
}

```

- |    |    |  |     |
|----|----|--|-----|
|    | b) | Write a program to read three sides of a triangle and calculate area only if the given data is valid and print.  | 8   |
| 4. | a) | Differentiate structure and union. How the members of structure are accessed? Show it with example.  | 8   |
|    | b) | What do you mean by user defined function? Explain storage classes.  | 7   |
| 5. | a) | Define pointer variable. What are the advantages of using pointer in a function?   | 7   |
|    | b) | Write a program to find the sum of only even elements of $4 \times 4$ matrix.  | 8   |
| 6. | a) | Show the comparison between function call by value and function call by reference with example.  | 7   |
|    | b) | write a program to read the name, author, and price of 500 books in a library and store the information into file "library.dat". Now print the book name and price of those books whose price is above Rs.300. | 8   |
| 7. |    | Write short notes on <b>(Any Two)</b>  | 2×5 |
|    | a) | File opening modes   |     |
|    | b) | Header files   |     |
|    | c) | Local and global variables   |     |