

**First Semester Examination –Dec- 2005
Programming in C**

Full marks – 70

Time : - 3hours

Answer Question No. 1 which is compulsory and any five from the rest.
The figures in the right-hand margin indicate marks.

1. Answer the following questions: 2x10

- (a) What do you mean by a computer word?
- (b) What do you mean by average Latency time?
- (c) Find the sum in terms of binary form :
(25.45)₈+(E4.C5)₁₆
- (d) Distinguish between compiler and interpreter.
- (e) Find the output of the following program segment :

```
void main()
{
    int a=10, b=7;
    a=a - b;
    b=a + 7;
    printf("\n The values of a and b are %d and %d",a,b);
}
```

- (f) What will be the output of the following program segment? Explain with reasons.

```
void main()
{
    char name [3]= {'R', 'A', 'M'};
    char name1[4]={'R', 'A', 'M'};
    clrscr();
    printf("name = %s", name);
    printf("\n name1 = %s", name1);
}
```

- (g) What do you mean by recursion?
- (h) What will be the output of the following program?

```
void main()
{
    int a = 25, b=10, *p, *q;
```

```

p=&a;
q=&b;
clrscr();
printf("\n The sum a + b=%d and a - b=%d", *p + b, *p - b);
printf("\n a*b=%d and a/b=%d", *p* *q, *p/*q);
printf("\n a mod b=%d", *p%*q);
}

```

- (i) What is meant by an array of structures? Write its corresponding program segment.
 - (j) What do you mean by a file? Write the program segment to open a file.
2.
 - (a) Explain the purpose of assigning addressed to memory locations in the main memory of a computer. (5)
 - (b) What is CD – ROM? Explain in detail and write its merits and demerits. (5)
 3. (a) Write an algorithm, flowchart and C program to find the LCM and HCF of two given numbers m and n. (10)
 4.
 - (a) Write a flowchart and C program to reverse a given number n. (5)
 - (b) Write a C program to delete the occurrence of vowels in a given word.(5)
 5.
 - (a) Write a C program to sort the given string alphabetically. (5)
 - (b) What do you mean by recursion? Using recursive function write a C program to find factorial of a given number n. (5)
 6. What do you mean by a pointer variable? Explain in detail how pointer variable can be accessed using example. Write a C-program to read string from keyboard and display it using character pointer. (10)
 7. Write a C program to accept the following elements and print the total and average. Use a function which will return the structure. Structure elements are Regno, mark1, mark2, mark3, total and average. (10)
 8.
 - (a) What is a file? How many files are there in C? Write the syntax for opening a file, reading a file and closing a file. (5)
 - (b) Write a C program to create a file for RD account in a bank assuming the file structure as RD account no, installment amount and number of installments. (5)

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KRUPAJAL ENGINEERING COLLEGE
www.krupajalgroup.org

Prasanti Vihar, Pubasasan,
Bhubaneswar-751 002,
Phone No.-+91-674-2465129/701
Fax-(0674) 2465701