

**Bachelor of Computer Applications
Annual Examinations – 2006**

**Paper BCAD – 203
Programming in C**

Time allowed: Three hours

Maximum Marks: 100

Attempt five questions. Question 1 is compulsory. Marks are written in the margin.

	Marks
1 (a) What will be output of the following	04
<pre>main() { int i=-3, j=2, k=0, m; m=++j && ++i ++k; printf("i=%d, j=%d, k=%d, m=%d", i, j, k, m); }</pre>	
(b) Explain the following with the help of suitable example	04
1) Size of operator 2) Conditional operator	
(c) Explain the various data type available in C	04
(d) Explain the various input/output functions available in C	04
(e) Explain the various Loops available in C	04
(f) What is an array? Explain with the help of suitable example.	04
(g) Explain the concept of recursive function with the help of suitable example.	04
(h) Explain the basic concept of pointer with the help of suitable example.	04
(i) Explain how structures are passed to functions with the help of suitable example.	04
(j) What is Union in C? Explain	04
(k) Explain the following functions :- 1) Calloc 2) malloc	04
(l) Explain the following functions :- 1) fseek 2) ftell	04
(m) What is Macro? Explain with the help of suitable example	04
2. Write a program in C to calculate the following sum	12
Sum = 1 + <u>2</u> + <u>3</u> + <u>4</u> + <u>5</u> + + <u>N</u>	

2! 3! 4! 5! N!
 program should be well documented.
 3. Write a program in C to calculate sum of digit of a given integer. Program should be well documented. 12

4. Write a program in C to copy the content of one file into another file 12

5. Write a program to generate meritlist of N students who have appeared in three subjects each carrying maximum of 100 marks. 12

6. Write the output of the following programs after removing the errors if any 3X4

a)

```
#include <stdio.h>
void main()
{
  char a[] = "sunshine";
  char *p = "sunstroke";
  a = "sunstroke"
  p= "sunshine"
  printf ("|n%s",a,p);
```

b)

```
#include<stdio.h>
int *func()
{
  static int x=0;
  x++;
  return&x;
}
int main()
{
  int *y=func();
  printf ("%d", (y)++);
  func();
  printf("%d|n",*y);
  return 0 ;
}
```

c) Distinguish between structure and union with the help of suitable example

7. Write a program in C for preparing the following operations on two matrices of dimensions m X k and k X n 2X6

1) Addition

2) Multiplication