C 5629 (Pages : 3) Name.....

Reg. No.....

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2016

(CUCBCSS—UG)

Complementary Course

BCS 2C 02—PROGRAMMING IN C

Time : Three Hours Maximum : 64 Marks

Part A

Answer **all** *the questions.*
Each question carries 1 *mark.*

1. Define integer constant.
2. During modulo division the sign of the result is always the sign of ————.
3. What will be the result of the following program ?

```
main()
{
 int a,b;
 a=2; b=3;
 scanf("%f %f ",&a,&b);
 printf("%d %d ",a,b);
}
```

4. What is the associativity of the conditional operator ?
5. The process of allocating memory at run time is called ————.

Turn over

6. What is the output of the following function :

```
int f1 (int a, int b)
{
 return (f2(20));
}
 int f2(int a)
{
 return(a*a);
}
```

7. A block of memory can be allocated using the function ————.

8. If the two strings are identical, then strcmp() function returns.

9. What does the file type "r+" means ?

(9 × 1 = 9 m

Part B

Answer **all** *the questions.*
Each question carries 2 *marks.*

10. What is a character constant ? How it differ from numeric type constants ?

11. How can the getchar() function be used to read multicharacter strings ?

12. Write a program to find the biggest of three numbers.

13. Define pointer variables.

14. Write the syntax of fprintf() and fscanf() functions.

(5 × 2= 10 m

Part C

Answer any **five** *questions.*
Each question carries 5 *marks.*

15. Explain the difference between getchar() and gets(), putchar() and puts( )functions.

16. Explain call by value and call by reference with suitable examples.

17. Write the syntactic rule associated with the ' for' statement ?

18. Write a function that calculate and display the roots of the quadratic equation :

$ax^2 + bx + c = 0.$

19. How the indirection operator can be used to access a multidimensional array element ?

20. Write a program to determine whether a number is prime or not using break statement.

21. Write a loop that will examine each character in a character type array and determine how many characters are vowels and how many are consonants.

22. What is meant by opening a data file ? How is this accomplished ?

(5 × 5 = 25 marks)

Part D

Answer any **two** *questions.*
Each question carries 10 *marks.*

23. Define branching. Explain various branching and looping statements available in C with examples.

24. (a) Write a recursive function to generate and print first n Fibonacci numbers.

    (b) What are pointer expressions ? Write a program using pointers to compute the sum of all elements stored in an array.

25. What is a file ? Why is it needed ? Explain various operations that can be carried out on files.

(2 × 10 = 20 marks)