C 24770 **(Pages : 3)** **Name**.....

Reg. No.....

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2017

(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. What are keywords ?
2. a=a/n+1. The equivalent statement with shorthand operator is ————.
3. What will be the output of the following program

```
main()
{
  int a,b;
    a=10; b=20;
    prinf("%d ", a,b);
}
```

4. Which is the arithmetic operator with lowest precedence ?
5. Elements of the array are accessed by ————.
6. What is the result for the following declaration ?

```
int array[ ] = { 1, 2, 3, 4, 5 };
printf( "%d", &array[4] - &array[0]);
```

7. If there is any error while opening a file, fopen will return ————.

Turn over

8. What is the result of the following code ?

```
main()
{
  int a[ ]= {1,2,9,8,6,3,5,7,8,9};
  int *p=a+1;
  int *q= a+6;
  printf("\n%d", q-p);
}
```

9. Array passed as an argument to a function is interpreted as ————.

(9 × 1 = 9 marks)

Part B

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

10. What is the purpose of a type declaration ?
11. Describe two different forms of if-else statement. How do they differ ?
12. Write a program to print the first 10 natural numbers.
13. How values of an array is passed to a function ?
14. Differentiate between structure and union.

(5 × 2 = 10 marks)

Part C

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

15. What is a data type ? Explain the fundamental data types available in C with suitable examples.
16. What is meant by function prototype ? Write a function program to find the factorial of a number.
17. Define storage class. Explain various storage classes in C with examples.
18. Write a program to arrange the numbers of an array in ascending order.
19. Write a program to find the sum of digits of a number into a single digit.

20. What are pointers ? Explain how to perform arithmetic operations on pointers ?

21. Explain the various modes of fopen().

22. Write a program to find the product of two matrices.

(5 × 5 = 25 marks)

Part D

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

23. What is a string ? Explain various string handling functions in C with suitable examples.

24. (a) Write a program to read a line of text and output the number of words and characters ?

    (b) Write a program to find prime numbers between 50 and 500 ?

25. Write a program to read a list of words from a file, sort the words in alphabetical order and display them one word per line. Also give the total number of words in the list ?

(2 × 10 = 20 marks)