C 83008 (Pages : 2) Name

Reg. No.....

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2015

(CUCBCSS—UG)

Complementary Course—Computer Science

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 identifiers ?
2. The smallest individual unit in C program are known as _____
3. Find the error in the programme.

```
f(int a,int b)

int a;
a = 20 ; return a;
```

4. Find the output of the following program :

```
main ( )

i = 20 ; k = 0;
for (j = 1 ; j < i ; j=1+4*(i/j))
{k + = j < 10 ?4 :3;
}
```

- print f ("%d",k) ;

5. How many actual arguments shall be used for a "normal function call" for each formal argument ?
6. Size of a union is determined by size of the _____
7. What is 'a' in the following operation ?

```
fp = fopen("Random.txt", "a") ;
```

8. If the two strings are identical, then strcmp ( ) function returns _____
9. What does *p++ points to ?

(9 x 1 = 9 marks)

Turn over

Part B

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

10. What is a string constant ? How do string constant differ from character constant ?
11. What is the purpose of do-while statement ? How does it differ from while statement ?
12. What are the two principal components of a function definition ?
13. What is the purpose of register storage class ?
14. Write a program to determine whether a number is odd or even.

(5 x 2 = 10 marks)

Part C

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

15. What are arrays ? How array elements are passed to a function ?
16. Write a program to print all prime numbers from 1 to 300 using nested loops.
17. Write a program to calculate the sum of every third integer beginning with $i = 2$ using for statement.
18. Differentiate between exit controlled loop and entry controlled loop with suitable examples.
19. What is a recursive function ? Write a recursive function to find the factorial of a number.
20. Write a program that will determine the first n Fibonacci numbers.
21. Define a structure. How values are assigned to structure variables ?
22. What is meant by Dynamic memory allocation ? Explain various memory allocation functions ?

(5 x 5 = 25 marks)

Part D

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

23. (a) Write a program to merge two sorted array into a single sorted array in ascending order.
    (b) Write a function to remove duplicates from an ordered array.
24. Explain different types of operators available in C language with suitable examples ?
25. Define a structure called *cricket* that will describe the following information

    Player name , team name , batting average.

    Using *cricket* declare an array player with 50 elements and write a program to read the information about all the 50 players and print a team-wise list containing names of players with their batting average ?

(2 x 10 = 20 marks)