

(4)

- (b) Discuss the purpose and utility of Pointer in C Programming. 1.5
7. (a) What do you mean by recursion? Write a program to find out factorial of a given number using recursion. 3.5
- (b) Discuss the utility of storage class - Auto, Static, Extern by giving example. 4
- Unit-IV
8. (a) In what ways does an array differ from an ordinary variable? What condition must be satisfied by all the elements of a given array? 3
- (b) Write a C Program for the addition of two matrices. 4.5
9. (a) Write the meaning of following open modes of file - 4
w, r, a, w+, r+, a+
- (b) Write a short note on Union. 3.5

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B.Sc. (Part-II) Examination, 2015

(Old Syllabus)

COMPUTER SCIENCE

Paper - I

(Programming & Problem Solving Using 'C')

Time Allowed : Three Hours] [Maximum Marks : 50

Note: Answer five questions in all. Question No.

1 is compulsory. Attempt one question

from each of the four units. Suppose all

necessary files are included in program

segment.

1. (a) If the value of a is 5 initially, what shall be

the value of the expression? $2 \times 10 = 20$

$a += (a++) + (++a)$

Also explain how this expression is evaluated.

(b) Discuss various format specifier's used in

(2)

- input/output statements in C language.
- (c) Discuss the logical operators & &, ::, ! with example.
 - (d) Explain the utility of ternary operators.
 - (e) Differentiate between Call by value and Call by reference.
 - (f) Write a program in C to print first 10 terms of Fibonacci series.
 - (g) Explain the difference between array of a pointer and pointer of an array
 - (h) Differentiate between member access operators . and →
 - (i) Discuss the significance of header files in C programming.
 - (j) Given the radius, write a C Program to find the area and circumference of a circle.

Unit-I

- 2. (a) Describe the utility of preprocessor directives. 3
- (b) What are C-Tokens? 2
- (c) Explain the structure of a 'C' program. 2.5
- 3. (a) Discuss various data types used in C programming along with their memory requirements? 4

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(3)

- (b) Describe the concept of Input/Output function along with the syntax of formatted input/output function. 3.5

Unit-II

- 4. (a) Explain the utility of loops in programming. Discuss various types of loops used in C programming. Explain the syntax of for loop with example. Also elaborate an example of using for loop within for loop. 4
- (b) Write a program that inputs a five digit number and separates the number into its individual digits and prints the digits as well as the sum of all the digits . 3.5
- 5. (a) Explain the structure of switch case construct along with its purpose. Also elaborate the utility of break and continue with switch case with the help of example. 5
- (b) Write a short note on else-if ladder. 2.5

Unit-III

- 6. (a) By giving an example clearly differentiate between function prototype, function definition and function call in C. Discuss the advantages of using functions in C. 6

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P.T.O.