http://www.dcrustonline.com

50

Unit III

- 5. (a) Write a program in C that accepts two integer arrays a_1, a_2, \ldots, a_n and b_1, b_2, \ldots, b_n and find the sum of the corresponding elements of these arrays. 10
 - (b) What is an array ? Give the classification of arrays in brief. 10

6. (a) Distinguish between :

- (i) Arguments and Parameters
- (ii) Local Variables and Global Variables. 10
- (b) Write a C program to compute the sum of odd numbers using a function. 10

Unit IV

- 7. (a) What is a pointer ? Enumerate the advantages of pointer. 10
 - (b) Write a program in C for interchanging the value of two variables using pointer. 10
- 8. (a) What is a structure ? Explain the components of a structure. 10
 - (b) What is Union ? How does it differ from a structure ? 10

M-AA-315 4

AA-315

M. Sc. EXAMINATION, May 2018

(First Semester)

(Re-appear Only)

MATHEMATICS

MAT509B

Programming in C

Time : 3 *Hours*]

[Maximum Marks: 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit.

(2-11/15) M-AA-315

P.T.O.

http://www.dcrustonline.com

Unit I

1. (a) Using precedence rule in C, evaluate the following arithmetic expression : 5 2*((i/3)+4*(j-2))

> where i = 8, j = 5 explain each step one by one.

- (b) What are relational operators ? Explain with examples. 10
- (c) Write the C-equivalent of the following mathematical expressions :
 - (i) $\sqrt{a^2+b^2}$
 - (ii) $e^{|a|} + b$
 - (iii) $2a^2 + 3b^3$
 - (iv) $\log_e^{|x+y|}$
 - (v) $(a^3)^{1/5}$ 5
- 2. (a) What are bitwise operators ? Explain with examples.10

2

M-AA-315

- (b) Differentiate between : $2.5 \times 4 = 10$
 - (i) ++x and x++
 - (ii) Logical AND and Logical OR operators
 - (iii) (a&&b) and (a&b)
 - (iv) >> and << operators

Unit II

- 3. (a) Write a program in C which obtains the sum of all even integers between 1 and 50, using While loop. 10
 - (b) Explain the If-Else statement with its syntex, semantics with an appropriate example. 10
- 4. (a) Write a C program to find the largest among three input integers using appropriate control statements. 10
 - (b) Explain the nested for statement using an appropriate example. 10

(2-11/16) M-AA-315 3 P.T.O.