$\qquad$
5. (a) Write a program in $C$ that accepts two integer arrays $a_{1}, a_{2}, \ldots \ldots ., a_{n}$ and $b_{1}, b_{2}$, $\ldots \ldots . b_{n}$ and find the sum of the corresponding elements of these arrays. 10
(b) What is an array? Give the classification of arrays in brief.
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. $\mathbf{1 0}$
(b) What is Union? How does it differ from a structure ?

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## 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.

## Unit I

1. (a) Using precedence rule in C, evaluate the following arithmetic expression :

$$
2 *((i / 3)+4 *(j-2))
$$

where $i=8, j=5$ explain each step one by one.
(b) What are relational operators ? Explain with examples.
(c) Write the C-equivalent of the following mathematical expressions :
(i) $\sqrt{a^{2}+b^{2}}$
(ii) $e^{|a|}+b$
(iii) $2 a^{2}+3 b^{3}$
(iv) $\log _{e}^{|x+y|}$
(v) $\left(a^{3}\right)^{1 / 5}$
2. (a) What are bitwise operators ? Explain with examples.
(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.

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(b) Explain the If-Else statement with its syntex, semantics with an appropriate example.
4. (a) Write a C program to find the largest among three input integers using appropriate control statements.
(b) Explain the nested for statement using an appropriate example.
p.T.O.

