

8. (a) Compare structure with arrays. How structure members can be accessed ?  
(b) Describe the uses of structures and union.

No. of Printed Pages : 04

Roll No. ....

**AA315**

**M. Sc. EXAMINATION, May 2019**

(First Semester)

(B Scheme) (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. All questions carry equal marks.

M-AA315

4

50

(1-06/32) M-AA315

P.T.O.

### Unit I

1. (a) Explain C constants and C variables.  
(b) Describe arithmetic instructions and integer and float conversions.
2. (a) What are arithmetic operators ? Write a program using integer arithmetic to convert a given number of days into months and days.  
(b) Write a program to evaluate the roots of the equation  $ax^2 + bx + c = 0$ .

### Unit II

3. (a) Explain if and if-else statements. Also draw the flow charts of both. Write the program statement of if-else.  
(b) Describe the use of logical operators and switch statement.
4. (a) Develop the flow chart of loop control structures. Describe while loop and for loop.

M-AA315

2

- (b) Write notes on the following :
  - (i) do-while loop
  - (ii) go to statement.

### Unit III

5. (a) Explain one dimensional arrays with suitable examples. How can you initialize one dimensional arrays ?  
(b) Write a program which will read a text and count all occurrences of a particular word.
6. (a) Explain function header and function body.  
(b) Describe in detail function declaration.

### Unit IV

7. (a) Explain pointer variables declaration and pointer variable initialization.  
(b) What are the rules of pointer operations ? Write a program using pointers to compute the sum of all elements stored in an array.

(1-06/33) M-AA315

3

P.T.O.