(b) Write a program in C language that will read a string from keyboard and find whether the sting is a palindrome or not ? **8**

8. By using the concept of structures and arrays write a program in C language to read and display the record of 60 students of a class. Each record should store : Name, Address (H.No., Landmark, City), Roll No. and Branch of the student. **15**

AA-681

M.C.A. EXAMINATION, May 2017

(First Semester)

(B. Scheme) (Re-appear Only)

MCA-401

PROBLEM SOLVING &
PROGRAMMING IN C

Time : 3 *Hours*]   [*Maximum Marks :* 75

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.

Unit I

1. (a) Define an algorithm. Write at least five features of a good algorithm. **8**

(b) Draw and explain the memory hierarchy used in a computer system. **7**

2. (a) Perform the following conversions : **9**

(i) $(ABCD)_{16}$ = $(??????)_{10}$

(ii) $(2045)_{10}$ = $(?????)_{8}$

(iii) $(1011.1101)_{2}$ = $(??????)_{10}$

(b) Differentiate between system software and application software. **6**

Unit II

3. (a) List five functions of an operating system from user's point of view and list five functions from system's point of view. **10**

(b) Differentiate between shell and kernel of an operating system. **5**

4. (a) How is parallel transmission better than serial transmission ? Justify. **5**

(b) Describe briefly different types of network topologies. **10**

Unit III

5. (a) Write a program in C to read an array of *n* integers and then find out the smallest number. **8**

(b) Write a program in C to swap two numbers without using third variable. **7**

6. (a) What are the storage classes of C variables ? Explain briefly. **8**

(b) Write a program in C to calculate simple interest. Explain where necessary. **7**

Unit IV

7. (a) Are the following declarations same ? **7**

char str[6] = "Hello" :

char* str="Hellow"; If not explain the difference.