

SYSTEMS PROGRAMMING : Class Test II

Instructions: 1. **Total Marks: 20** **Duration 1 Hour (2.15 PM – 3.25 PM)**

2. Date : **07-11-2020**

3. Write your Roll Number, Name and upload pdf file in Microsoft Team

4. If you have any query, send message through Microsoft Team Chat

1. Write an assembly language program to add two 3 X 3 matrices, where matrices are stored in two dimensional array (row wise). You should not read the elements of the matrices. Elements may be initialized in data segment.
2. Write an assembly language program to perform the following task:
 - a) Read a string and display it. For read and display of string, call appropriate procedures. Do not write body of these procedures.
 - b) Reverse the given string and display it.
 - c) Check whether the string is palindrome or not.
3. Write a recursive procedure in assembly language to compute sum of the elements of an integer array using divide and conquer strategy. Write also the corresponding main code to test your recursive procedure.
4. Write an assembly language program using macros as follows:
 - a) Write one macro to read a character from keyboard
 - b) Write another macro to display a character
 - c) Using the above two macros, create another macro to read a string of characters from keyboard terminated by carriage return and display the string in the next line. Call this macro from main procedure.
5.
 - a) Write instructions to add a 32 bit number stored in A+2:A with another 32 bit number stored in B+2:B. Result will be stored in B+2:B.
 - b) Discuss the additional data types and registers available in 8087 numeric processor.

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