



**WEST BENGAL STATE UNIVERSITY**

B.Sc. Honours 5th Semester Examination, 2022-23

**CMSADSE01T-COMPUTER SCIENCE (DSE1/2)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates are required to give their answers in their own words as far as practicable.  
All symbols are of usual significance.*

**Answer Question No. 1 and any four from the rest**

1. Answer any **four** questions from the following: 2×4 = 8
- (a) What is the difference between Microprocessor and Microcontroller?
  - (b) What is the working principle of the Status Register of 8085 Microprocessor?
  - (c) What is TRAP?
  - (d) What do you mean by PSW?
  - (e) What do you mean by Vector interrupt?
  - (f) Why XCHG instructions are used?
2. (a) Draw the timing diagram of IN instruction. 4+4
- (b) Write the difference between memory mapped I/O and I/O mapped I/O.
3. (a) Write a program in assembly language to perform Decimal Addition of two 8 bit numbers whose sum is 8 bits or more. 4+4
- (b) Discuss the functions of following instruction of 8085.  
RAL, LHLD, PUSH, CMPM
4. (a) Draw and discuss of Interfacing a 256×8 static R/W memory with 8085 Microprocessor using 3×8 Decoder. 3+5
- (b) Let fifth line (O<sub>4</sub>) of 3×8 Decoder is attached with enable input of 256×8 static R/W memory to interface with the microprocessor. Find the Mirror memory range for this interfacing diagram.
5. (a) Write an Assembly language program to check whether a given binary string is palindrome or not. 5+3
- (b) Write a program to Enable RST 6.5 and Disable RST 7.5 and RST 5.5 interrupt.

6. (a) Discuss PUSH and POP instruction with the help of suitable example. 5+3  
(b) Discuss CALL and RET instruction for subroutine Call and Return with the help of suitable example and diagram.
7. (a) What are addressing modes? 3+5  
(b) Explain different modes of addressing used in 8085 microprocessor.
8. Write short notes on any *two* of the following: 4×2 = 8  
(a) Memory Interfacing  
(b) Multiplexer  
(c) Draw and discuss the timing diagram for MVI B, 09H.

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