

Indian Institute of Engineering Science and Technology, Shibpur

B.Tech. (Information Technology) 5th Semester Mid Semester Examinations, 2021

Microprocessor and Microcontroller (IT 3101)

Full Marks: 30

Time: 45 Minutes

Answer 3 questions

(45 minutes are allotted for answering the questions and 15 is allotted to scan and upload the answer sheet in the Google classroom)

1. a) Explain with the diagram the demultiplexing scheme of the Bus AD₇-AD₀ in 8085.
b) i) Discuss the use of READY pin of the 8085 CPU.
(ii) What are the Functions performed by the status signal S₀ and S₁? 4+3+3
2. a) What are the 1-byte, 2-byte, 3-byte instruction in 8085 microprocessor?
b) What is the function of STAX D instruction?
c) What is Register indirect addressing mode? Why is it called 'Register Indirect'? 4+2+4
3. a) Binary codes for B and C register is '000' and '001' respectively and that for MOV opcode is '01'. What will be the HEX code for 'MOV C,B'?
b) Explain the operation of LDA and STA instruction with help of suitable examples.
c) Write the difference between compare and subtract instructions in 8085. 4+4+2
4. a) Define Instruction cycle, Fetch cycle, Execute cycle, Machine cycle.
b) Draw the 8085 Timing Diagram for Execution of Instruction MVI A,47H. 6+4
- 5 Write technical notes on (Any two) 5x2=10
 - a. Arithmetic Logic Unit in 8085 microprocessor.
 - b. Function of SOD and SID Pin in 8085.
 - c. Stack operation and stack related instructions.
 - d. Function of DAA instruction in 8085
 - e. Registers not Accessible to the Programmer in 8085