

[39/A23]

SEAT No. _____

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SARDAR PATEL UNIVERSITY
B.Sc. (5th Semester) Examination
Saturday, 11th November 2017
10:00 a.m. to 1:00 p.m.

US05CELE03 - 8-bit Microprocessor programming and its applications

Total Marks : 70

Q.1 Choose the correct answer**[10]**

1. 8085 microprocessor has _____.
 (a) 40 pins (b) 14 pins (c) 20 pins
2. Multiplex address and data bus is _____.
 (a) A₉- A₁₅ (b) A₈- A₁₅ (c) AD₀- AD₇
3. The address bus of microprocessor 8085 contains _____ bits.
 (a) 8 (b) 16 (c) 4
4. Which instruction is used to complement the content of accumulator ?
 (a) XRA A (b) ANA A (c) CMA
5. Instructions can be classified according to their _____.
 (a) LSB & MSB (b) Number size (c) Word size
6. In the data transfer instruction the data is copied from _____.
 (a) Source to destination (b) Destination to source (c) None of these
7. In 8085 SUI instruction has _____ byte size.
 (a) Three (b) Four (c) Two
8. Conditional JUMP instruction is _____.
 (a) JMP 16-bit address (b) JC 16-bit address (c) None of these
9. JNC is _____ instruction.
 (a) 1-byte (b) 2-byte (c) 3-byte
10. Which instruction is used to store the content of accumulator to the specified address ?
 (a) STAX D (b) LDAX B (c) STA 8500

Q.2 Answer any TEN questions in brief**[20]**

1. What are the inputs of ALU ?
2. How many flags are there in 8085 microprocessor ? Name them.
3. Write a program to load 9FH in register B, Add 9FH with 4CH using ADI instruction, display the result at the OUT PORT0.
4. Which instructions are used to clear the content of accumulator ?
5. How many types of data transfer instructions are there, list them?
6. How many addressing modes are there and name them.
7. How many types of branch instructions are there, list them?

①

[P.T.O]

8. List the instructions which transfers the data from memory to microprocessor and microprocessor to memory.
9. Define program and software.
10. List the logical instructions.
11. What is the difference between INR R and DCR R instructions.
12. Write a program to load 25H in register B, Display 25H at port address 01H.

Q.3 Discuss in detail the architecture of 8085 microprocessor. [10]

OR

Q.3 Draw the pin out diagram of 8085 microprocessor. Explain in detail the functions of each pin. [10]

Q.4 (a) Classify the instruction according to their word size and explain it in detail. [05]
(b) Explain register addressing mode and direct addressing mode. [05]

OR

Q.4 (a) Explain Immediate addressing mode and Indirect addressing mode in details. [05]
(b) Explain the method of writing and executing a simple program. [05]

Q.5 Discuss in detail the Arithmetic instructions. [10]

OR

Q.5 Discuss in detail data transfer instructions. [10]

Q.6 Discuss in detail the additional data transfer and 16 bit arithmetic instructions. [10]

OR

Q.6 Discuss in detail the programming techniques. [10]

----- Best of Luck -----

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