

- Q.2 a. Explain with example the following set of instructions:
(i) MVI M, d8 (ii) LDAX r_p (iii) XCHG (iv) STAX r_p**

Answer: (i) Section 6.7 Page No 57 of Text Book-I
(ii) Section 6.12 Page No 62 of Text Book-I
(iii) Section 6.10 Page Nos 58 & 59 of Text Book-I
(iv) Section 6.13 Page Nos 62 & 63 of Text Book-I

- b. Explain different flag registers present in 8085.**

Answer: Section 7.1.2 Pages 66-68 of Text Book-I

- c. Discuss different stack operation instructions of 8085. (any four)**

Answer: Section 9.2 to 9.10 Pages 92 – 98 of Text Book-I

- Q.3 a. Differentiate between CALL and JUMP instruction of 8085 and mention various conditional call instructions.**

Answer: Section 10.4.1 and 10.5 Pages 107-111 of Text Book-I

- b. Explain the instruction cycle steps in 8085 microprocessor.**

Answer: Section 13.2 Pages 140-141 of Text Book-I

- Q.4 a. Write an 8085 assembly language program to exchange 10 bytes of data stored from location x with 10 bytes of data stored from location y.**

Answer: Section 14.1 Pages 165-166 of Text Book-I

- b. Write 8085 assembly language program along with flow chart to find the smallest of N 1-byte numbers. The N value is provided at location X, and the no's are present from location X+1. Display the smallest no in data field and its location in address field.**

Answer: Section 16.2 Pages 208-210 of Text Book-I

- Q.5 a. Explain in detail status check data transfer scheme with the help of a flow chart.**

Answer: Section 18.1.2 Pages 279-281 of Text Book-I

- b. With necessary waveforms, explain the need for INTR and INTA* pins and action taken by 8085 when INTR pin is activated.

Answer: Section 18.4, 18.4.1 Figure 18.10 Pages 288-290 of Text Book-I

- Q.6** a. Discuss the following w.r.t. 7 segment display interface:
(i) Layout of 7 segment display
(ii) Internal circuitry of 7 segment common anode display
(iii) Condition for glowing of a LED.

Answer: (i) Section 22.1 Pages 370 – 371 of Text Book-I
(ii) Section 22.2 Pages 370 – 371 of Text Book-I
(iii) Section 22.3 Page 370 – 371 of Text Book-I

- b. Give the description of matrix keyboard interface.

Answer: Section 22.5 Pages 381-382 of Text Book-I

- c. Explain the following pins w.r.t. INTEL 8279

(i) C / D (ii) RD* (iii) Shift (iv) B₃₋₀

Answer: Section 22.6.1 Pages 385-387 of Text Book-I

- Q.7** a. Explain all the registers used in 8259.

Answer: Section 23.4 Pages 422-424 of Text Book-I

- b. What is DMA? Explain the need for DMA data transfer.

Answer: Section 24.1 & 24.2, Pages 442-444 of Text Book-I

- c. Mention the conditions for the following modes w.r.t. 8257

(i) When processor is the master & 8257 is slave.

(ii) When processor is in HOLD state & 8257 is in master mode.

Answer: Section 24.3.1 & 24.3.2 Page No 446 of Text Book-I

- Q.8** a. Explain the status port of 8251.

Answer: Section 26.7.4 Pages 491-492 of Text Book-I

- b. Explain the internal architecture of 8253.

Answer: Section 25.3 Pages 463-467 of Text Book-I

Q.9 a. Write the simplified block diagram of 8051 microcontroller.

Answer: Figure 29.3 Page 549 of Text Book-I

b. Explain internal RAM organization of 8051.

Answer: Section 29.4.1 and Fig 29.9 Pages 552-553 of Text Book-I

TEXT BOOK

- I. The 8085 Microprocessor; Architecture, Programming and Interfacing, K. Udaya Kumar and B. S. Umashankar, Pearson Education, 2008