



- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Draw and explain internal architecture of 8085 Microprocessor. **8**
- b) What is Digital Computers? Explain. **5**

OR

2. a) Interface Microprocessor 8085 with following memory IC's. Assume suitable starting for each memory IC. **8**
 - 2K x 8 RAM - 2 No.s.
 - 2K x 8 EPROM - 2 No.s.Give the complete Map.
- b) Explain difference between absolute and linear decoding. **5**
3. a) What do you mean by addressing modes? Explain the addressing modes of $\mu\text{p}8086$ with examples. **6**
- b) Write a program to transfer block of 10 bytes from source memory 1100H to destination memory 2200H. **7**

OR

4. a) Explain the following instructions with operation : **8**
 - i) LDAX Rp;
 - ii) LXI Rp, data;
 - iii) DAD Rp
 - iv) HLT
- b) Explain how microprocessor respond to CALL instructions. Give all conditional and unconditional CALL instructions of 8085. **5**

5. a) Explain how 8085 respond to interrupt. Also draw and explain hardware interrupt structure of 8085. 8
- b) Explain the interrupt related instructions RIM, SIM, EI and DI in detail. 6
- OR**
6. a) Write a program to generate continuous sawtooth waveform with a period of $600\mu\text{s}$. Assume the system clock period is 300 ns and use SOD pin to output the square wave. 7
- b) Explain different data transmission formats use in serial communications. 7
7. a) Draw and explain the architecture of programmable peripheral interface 8255 in detail. 7
- b) Interface 8 units of 7 segment display with $\mu\text{p}8085$ using 8255 IC and explain it. 7
- OR**
8. a) Interface stepper motor with $\mu\text{p}8085$ and explain the process to rotate the motor in clockwise direction. 8
- b) What do you mean by bus contention? Explain how it can be avoided. 6
9. a) Explain the role of avionics system and also explain avionic environment. 7
- b) Explain any two display technologies in details. 6
- OR**
10. a) What is intelligent display management? Explain in detail. 7
- b) How can manage and control the data in avionics system. 6
11. a) Which type of signal is used for digital communication. How it encoded and decoded in required form? 7
- b) Explain the following. 6
- i) ARINC 426
- ii) MIL STD 1553
- OR**
12. a) What is optical fiber? Explain how you can classify optical fiber. Discuss their characteristic features. 7
- b) Write short notes on. **any two.** 6
- i) Integrated modular avionic system.
- ii) Commercial standard digital bus.
- iii) Microphones.
