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- 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.
 11. Use of non programmable calculator is permitted.

1. a) Explain the concept of Digital computer. 5
- b) Draw and explain the architecture of μ p-8085 8

OR

2. a) Give the format of Flag register of 8085. Explain each flag. 7
- b) Connect Following memory ICS with 8085 microprocessors. 6
3. a) What the different addressing mode of μ p 8085 Explain in detail. 7
- b) Explain the following instructions of 8085 μ p. 6
- i) PCHL
 - ii) LDA-16 bit address.
 - iii) PUSH π_p .

OR

4. a) Write a program to multiply two 8-bit numbers using successive addition method. The two numbers are in D and E register. Store the result in HL register. 7
- b) Explain what do you mean by stacks and subroutines. 6
5. a) Draw and explain interrupt structure of 8085 microprocessors. 7
- b) Write a program to generate 300 pulses on SOD pin of 8085 having freq. 100Hz. The percentage duty cycle is 25%. 6

OR

6. a) Explain different methods of Data transfer. 6
b) Write 8085 ALP to convert packed BCD number stored on memory location 4000 H to its equivalent binary and store it in memory location 7000 H. 7
7. a) Explain 8255 PPI with neat block diagram. 7
b) Interface stepper motor with μ p 8085 and write a program to rotate motor in counter clock wise direction. 6

OR

8. a) Explain various modes of operation of 8255 PPI. 7
b) Write technical notes on Bus contention and slow memories interfacing. 6
9. a) Explain DVI concept in cockpit. 4
b) Explain multifunction displays. 3
c) Explain the importance of avionics system. Also define the usage of avionics in space system. 7

OR

10. a) Give the general advantage of Avionics over the conventional aircraft system. 7
b) Explain the basic principle of HUD (Head-up-display) and what are its limitations. 7
11. a) Discuss the communication system used in aircrafts. 7
b) Explain the ARINC-426 data Bus on details. 7

OR

12. a) With a neat block diagram, explain the integration of different avionics' systems. 7
b) What are the three types of terminate in MIL-STD 1553 data Bus? 7
