

[07 – 2218]

II/IV B.Tech. DEGREE EXAMINATION.

Second Semester

Computer Science and Engineering

MICROPROCESSORS — I

(Common with I.T and Dual Degree Programme in CSE)

(Effective from the admitted batch of 2007–2008)

Time : Three hours

Maximum : 70 marks

Question No. 1 is compulsory.

Answer any FOUR from the remaining.

All questions carry equal marks.

1. (a) What is the difference between a microprocessor and micro-computer?
- (b) Explain the function of ALE signal of 8085.
- (c) Explain the use of DAA instruction.
- (d) Draw the Flag Register format of 8085.
- (e) Explain the function  $\overline{LOCK}$  signal of 8086.
- (f) Explain SHR and SAR instructions of 8086.
- (g) What is a macro?

2. (a) Draw the internal architecture of 8085 and explain. (10)
- (b) Explain the function of HOLD and HLDA signals of 8085. (4)
3. (a) Explain the Stack instructions of 8085. (7)
- (b) Write a 8085 assembly language program to find the product of 16-bit and 8-bit binary numbers. Assume suitable memory locations. (7)
4. (a) Explain addressing modes of 8085. (7)
- (b) Explain CALL and RETURN instructions of 8085. (7)
5. (a) Explain maximum and minimum mode operation of 8086.
- (b) Explain LEA, LDS and LES instructions of 8086. (7 + 7 = 14)
6. (a) Write a 8086 program to compare two strings. If two strings are same, store zero in Memory location X. Assume suitable memory locations. (7)
- (b) Draw and explain the format of Flag Register of 8086. (7)

7. (a) Write a 8086 program to calculate factorial of a given integer. (7)
- (b) What are the functions of the ALE and INTA bar signals of 8086? Explain. (7)
8. Answer the following :
- (a) 16-bit data transfer instructions of 8085. (5)
- (b) RIM and SIM instructions of 8085. (5)
- (c) Time delay loops. (4)