

TM142160B

Reg. No.....

Name .....

**B.Sc.DEGREE (CBCSS) EXAMINATION, APRIL 2015  
SECOND SEMESTER – COMPUTER APPLICATIONS  
CA2MCO – MICROPROCESSORS AND COMPUTER ORGANIZATION**

**Time : 3 Hours**

**Maximum : 80 Marks**

**Part A ( Short Answer Questions)**

**Answer *all* questions. Each question carries 1 mark.**

1. What is word length?
2. Which register is used as the working area of a microprocessor?
3. What is the capacity of Stack Pointer (SP) in Intel 8085?
4. Which flag is being set when the result of an arithmetic operation contains even number of 1's?
5. How much is the memory addressing capability of 8086 microprocessor?
6. Which functional unit of 8086 is responsible for address relocation?
7. What is RPN?
8. What are the two different ways by which a stack can be organized?
9. Write the expansion of UVPRM?
10. Which memory unit communicates directly with the CPU?

(10 × 1 = 10)

**Part B (Brief Answer Questions)**

**Answer any 8 questions. Each question carries 2 marks.**

11. What is the use of control bus?
12. Differentiate between microcomputer and microprocessor.
13. The following signed numbers are added in the ALU of a microprocessor, 1010 0110 and 1111 1101. How will this addition affect each of the following flags?  
a) Zero Flag(Z)                      b) Carry Flag(C)
14. What is the use of the pin HOLD in Intel 8085?
15. Differentiate between machine cycle and wait cycle.
16. Discuss the function of Instruction Pointer in Intel 8086.
17. What do you mean by based indexed addressing?

18. What does the EU do in the 8086?
19. What are the major components of CPU?
20. Write 2-address instructions to perform  $X = (A+B)*(C+D)$ .
21. What is hit ratio?
22. Explain RAM.

(8 × 2 = 16)

**Part C (Descriptive/Short Answer Questions)**  
**Answer any 6 questions. Each question carries 4 marks.**

23. Explain the various bus structures in a computer.
24. Discuss about instruction classification in Intel 8085.
25. Draw the timing diagram for a memory read cycle.
26. Explain various registers in Intel 8086.
27. Explain the maximum mode operation of Intel 8086.
28. Describe different instruction formats with example,
29. How stacks can be used for the evaluation of an arithmetic expression in postfix form? Give an example.
30. Compare and contrast between SRAM and DRAM.
31. What is a memory address map?

(6 × 4 = 24)

**Part D (Long Essay Questions)**  
**Answer any 2 questions. Each question carries 15 marks.**

32. Explain the addressing modes of Intel 8085.
33. Draw the pin-out diagram of Intel 8086 and explain.
34. Describe memory mapping techniques associated with cache memory.
35. Write short notes on:
  - a) Memory locations & addresses
  - b) Register stack

(2 × 15 = 30)