C.B.C.S.S B.Sc Degree Examination, April 2010

Fourth Semester

Computer Science

Complementary Course – **Microprocessors and Assembly Language Programming**

Time : Three Hours **Total Weight : 25**

Part A

Answer all questions

Each bunch of four questions carries a weight of one

Fill in the Blanks:

I) 1. 8086 has _____ address lines.

2. High performance engineering work stations often us ____instruction set computers.

3. The address bus of 80386 is _____ bits wide.

4. The condition of status flag is _____ when write operation is performed by 8086.

II) 5. Virtual memory capacity of 80286 is _____.

6. _____ chip is used as a timer.

7. 80386 is a _____ bit processor.

8. 8086 can address upto _____ physical memory locations.

Objective type question:

III) 9. What is output of the following code AX = 37D7H, BH = 151 decimal DIV BH

(a) AL = 65H, AH= 94 decimal (b) AL= 5EH, AH= 101 decimal (c) AH= E5H, AL= 5EH (d) AL= 56H, AH= 5EH

10. Which interrupt has the highest priority?

a) INTR b) TRAP c) RST6.5 d) RST 7.5

11. Which are software interrupts?

a) RST 0 - 7 b) RST 5.5 - 7.5 c) INTR d)TRAP

12. $\overline{BHE}$ of 8086 microprocessor signal is used to interface the

a) Even bank memory b) Odd bank memory c) I/O d) DMA

13. How many pins does an 80386DX has

(a) 128 (b) 132 (c) 64 (d) 120

14. In 8086 the overflow flag is set when

a) The sum is more than 16 bits b) Signed numbers go out of their range after an arithmetic operation c) Carry and sign flags are set d) During subtraction

15. To put the 8085 microprocessor in the wait state

a) lower the-HOLD input b) lower the READY input c) raise the HOLD input d) raise the READY input

16. The 4004 microrprocessor was released in the year of:

a.) 1964 b.) 1968 c.) 1972 d) 1971

Part B

Answer five questions out of eight
Each bunch of four questions carries a weight of one

17. Describe the difference between instructions MOV AX, 2437H and MOV AX, [2437H]?
18. What is the advantage of using assembly language instead of writing program in machine language?
19. Compare 8086 and 8088 µp's?
20. Compare memory mapped I/O and peripheral mapped I/O?
21. Write notes on segment registers of 8086?
22. What is pipelining?
23. What factors determine how much physical memory an 80286 can address?
24. Write a delay loop which produces a delay of 500 µs on an 8086 with a 5 MHz clock?

Part C

Answer four questions out of six
Each bunch of four questions carries a weight of two

25. Describe how an assembly language program is developed and debugged using system tools such as editors, assemblers, linkers, locators emulators and debuggers?
26. Define the term reentrant and explain how you must pass parameters to a procedure so that it is reentrant?
27. Write notes on directives?
28. Write the differences between minimum mode and maximum mode operations of 8086.
29. Describe the paging concept of 80386?
30. Write note on MACROS?

Part D

Answer two questions out of three
Each bunch of four questions carries a weight of four

31. With a neat Block diagram explain the architecture of 8085µp?
32. With a neat block diagram explain 8257?
33. Describe the bus activities during read machine cycle?