OR

Q.11 a) Write important any four feature of pentium processor. 4

b) Explain RAM organization of 8051 microcontroller. 4

c) Write possible applications of 8051 microcontroller. 3

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SCD - 4830

First Year B.C.A (Semester - II) Examination
Paper - 15BCA113
Microprocessor

Time : Three hours] [Full Marks - 60

N.B. : i) All questions carry equal marks
ii) Question No. 1 is compulsory
iii) Due credit will be given to neatness & adequate dimensions.
iv) Assume suitable data wherever necessary.
v) Illustrate your answer necessary with the help of neat skectches.
vi) Use Blue/Black ink/refill only for writing the answer book.

Q.1 Choose correct Alternative. 5

a) Address bus of 8086 microprocessor is ____
i) 16 bit ii) 20 bit
iii) 24 bit iv) 32 bit

b) NOTBx instruction belongs to _____ group.
i) Data transfer ii) Arithmatic
iii) Logical iv) Branch control

c) DB means _____
i) Destination Byte ii) Define Byte
iii) Data Byte iv) Double

d) 8086 µp have ____ data/Address pins in multiplexing mode.
i) 8 ii) 16
iii) 20 iv) None of these

e) The 8051 microcontroller has ____timer / counter
i) One ii) Two
iii) Three iv) Four

Q.2 a) Explain the software or programming model of 8086 microprocessor. 6

b) Explain the function of each flag bit in flag register. 5

OR

Q.3 a) Draw the internal block diagram of 8086 microprocessor and explain the function of each block. 6

b) Explain the evolution of microprocessor. 5

Q.4 a) Explain the addressing modes of 8086 microprocessor. 6

b) Explain the meaning of following instructions. 5

i) MOV AX, [2000] ii) MUL BX

iii) INC BX iv) OR AX, BX

v) CMP AX, BX

OR

Q.5 a) Explain the MOV instruction in Six various addressing mode. 6

b) Explain the meaning of following instructions. 5

i) ADD AX, BX

ii) ADD AX, [2000]

iii) DIV BL

iv) TEST AL, BH

v) XOR AL, BL

Q.6 a) Explain the meaning of following instruction. 6

i) JMP BX

ii) CALL WORD PTR [BX]

iii) RET

iv) STC

v) CMC

vi) STI

b) Write ALP program to find maximum number in array. 5

OR

Q. 7 a) Explain the meaning of following assembler directive and their use. 6

i) ALIGN ii) END

iii) EQU iv) DW

v) PTR vi) ORG

b) Write ALP program to find minimum number in array. 5

Q.8 a) Draw the pin diagram of 8086 µp. 6

b) Explain the function of interrupt in interrupt vector table. 5

OR

Q.9 a) Explain the function of following pins. 11

i) AD0 - AD15 ii) A16/S3 - A19/S6

iii) $\overline{RD}$ iv) MN/$\overline{MX}$

v) HOLD & HLDA vi) INTR

vii) ALE viii) M/$\overline{IO}$

ix) TEST x) READY

xi) RESET

Q.10 a) State the possible differences between microprocessor and microcontroller. 5

b) Explain following concept in pentium microprocessor.

i) Super scaler pipeline architecture 6

ii) RSIC concept