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SUBJECT CODE NO:- H-207
FACULTY OF ENGINEERING AND TECHNOLOGY
S.E. (CSE/IT)
Microprocessor & Computer Organization
(REVISED)

[Time: Three Hours]

[Max. Marks: 80]

Please check whether you have got the right question paper.

N.B

- 1) Q. 1 & 6 are compulsory.
- 2) Solve any two questions from remaining in each Section.
- 3) Assume suitable data if necessary.

Section AQ.1 Solve any five:- 10

- i) List out segment registers of 8086. & describe use of any one.
- ii) Which factor defines the addressing space of microprocessor and How?
- iii) What is difference between assembler directives and instructions?
- iv) List out any four differences between 8086 and 8088 microprocessor?
- v) What is use of READY pin in 8086?
- vi) What is IVT?
- vii) Describe DAA instruction with example.

Q.2 a) For the following instructions identify addressing modes and Calculate 20 bit physical address. Direction flag is set. 10

- i) MOV SB
- ii) MOV AX, [SI]
- iii) MOV CX, [BX + SI]
- iv) MOV DX, 01888 H
- v) PUSH A

Where,

[CS]=0100 H	[DS] = 0AC00H	[ES] = 0B930H
[SS] = 0CD09H	[BX] = 03417H	[BP] = 09000H
[IP] = 0000H	[SI] = 0193FH	[DI]= 0F3EEH
[SP] = 001C1 H		

b) Draw and explain read cycle timing diagram of 8086 for minimum mode. 05Q.3 a) Explain the minimum mode configuration of 8086 with neat diagram? 07b) What is memory map? Explain the concept of even and odd memory banks? 05

- c) Explain the use of following pins in 8086. 03
 i) TEST ii) ALE iii) INTR
- Q.4 a) Write an interactive Assembly language program to convert two digit BCD number into equivalent HEX number. 08
 b) What is Interrupt vector table? How it is related with ISR? For int 31H how system finds address of ISR? 07
- Q.5 Write short notes (any three) 15
- i) TSR program
 ii) PSP
 iii) .EXE Vs. .COM Files
 iv) Near and Far Procedure
 v) 8088 Maximum mode.

Section B

- Q.6 Solve any five:- 10
- i) Define computer organization?
 ii) List out any two functions of control unit?
 iii) What is RISC?
 iv) Enlist any four features of Vth generation of computers?
 v) What is PROM?
 vi) What is data path?
 vii) What is use of MAR and MBR?
- Q.7 a) Explain Von Neumann Architecture with neat diagram? 05
 b) Describe functional components of a computer? 05
 c) Compare and contrast CISC and RISC? 05
- Q.8 a) What is control unit? How it is designed? Explain any one method. 08
 b) What is instruction cycle? Explain different steps of instruction cycle with example. 07

- Q.9 a) What is memory organization? Explain in detail hierarchical memory organization? 06
- b) What is serial port? Explain COM port in detail? 04
- c) Explain semiconductor memory in detail. 05

Q.10 Write short note (any three) 15

- 1) SRAM and DRAM
- 2) SCSI and USB bus
- 3) Data Path
- 4) Classification of computers
- 5) Output devices
- 6) Working of ALU