

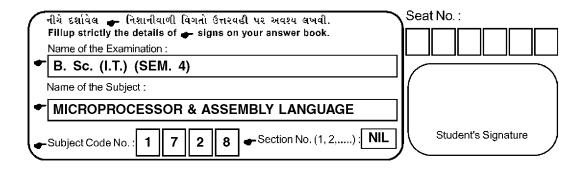
DDD-1728

B. Sc. (I.T.) (Sem. IV) Examination March / April - 2016

Microprocessor & Assembly Language

Time: 3 Hours] [Total Marks: 70

Instruction:



- 1 Answer the following questions:
 - (a) Answer the following short questions: (any four)
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- (i) List out segment registers in 8086 microprocessor.
- (ii) Which instruction updates only status flags without storing result in 8086 ?
- (iii) List out pins available to sense hardware interrupt on 8086 microprocessor IC.
- (iv) Explain functionality of ALU in 8086 microprocessor.
- (v) Explain NOT instruction.
- (b) Answer the following questions in detail: (any two) 14
 - (i) Draw 8086 microprocessor and explain Bus Interface Unit (BIU) in detail.
 - (ii) (a) Draw 80486 microprocessor block diagram. 4
 - (b) Explain interrupt -0, interrupt -1, interrupt -2. 3
 - (iii) (a) Draw block diagram of 8255 programmable 4 peripheral interface IC.
 - (b) Explain ALE, DEN, INTR pin of 8086 3 microprocessor.

2	Answer the following questions in detail: (any two)				
	(i)	(a)	Explain following pins in detail; (a) AD0-AD15 (b) HOLD (c) RD (d) INTA (e) READY (f) DT/R	6	
		(b)	Draw block diagram of 8259 programmable interrupt controller IC.	3	
	(ii)	8086	cribe memory READ operation in minimum mode of B microprocessor with the help of necessary circuit ram and timing diagram.		
	(iii)	Writ (a) (b) (c) (d)	te following instructions with examples : (any three) CMPSB JZ MOV SUB	ı	
3	Answer the following questions: (a) Answer the following short questions: (any six)				
	(4)	(i)	List out the POINTER registers of 8086 microprocessor.	6	
		(ii)	What is the role of instruction queue of 8086 microprocessor?		
		(iii)	Which instruction use to store flag register content on stack memory.		
		(iv)	When INT-0 interrupt is generated?		
		(v)	Write software interrupt number of non-maskable interrupt (NMI).		
		(vi)	Explain DF flag of 8086 microprocessor.		
		(vii)	Which programmable IC is use as a programmable timer interval IC ?		
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(b)	Answer the following questions in detail: (any two)						
	(i)	Explain instruction template of 8086 microprocessors in detail with example.					
	(ii)	What are the steps to access interrupt service					
		routine during interrupt generation?					
	(iii)	Describe following directives with examples:					
		(a) EQU					
		(b) DB					
		(c) LENGTH					
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		the following questions in detail:	16				
(a)	Fine	d out given statements are true or false.	4				
	(i)	80286 is 16-bit microprocessor.					
	(ii)	ALU is performing arithmetic operations only					
	(iii)	8086 microprocessor have 6-segment registers.					
	(iv)	INT0 to INT-3 are user define interrupts in 8086					
		microprocessor.					
4.			10				
(b)	Ans	Answer the following questions in detail: (any three) 12					
	(i)	Write program to subtract 0×40 from consecutive					
		10 memory locations content starting from 0×7501					
		to $0\times750A$ and store result on memory location 0×8601 to $0\times860A$.					
	(···)						
	(ii)	Describe memory addressing modes of 8086 microprocessor in detail with example.					
		moroprocessor in detail with example.					

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(iii) Write program to find factorial for any number and

store final result on memory location 0×9001 .

(iv) Write comments for given program.

MOV AX, 0×6000

MOV CS, AX

MOV SI, 0×0500

MOV DI, 0×0800

MOV DS, 0×4000

MOV BX, [SI]

MOV CX, 0X07

Abc: INC SI

INC DI

MOV AX, [SI]

ADD AX, BX

MOV [DI], AX

LOOP Abc

MOV BL, 02

MOV [SI], BL

END