JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT MAKEUP EXAMINATION – April 2018 B.Tech, IVth Semester (CSE)

COURSE CODE: 10B11CI401	MAX. MARKS: 25
COURSE NAME: MICROPROCESSORS AND CONTROLLERS	S
COURSE CREDITS: 4	MAX. TIME: 1.5 Hrs
Note: All questions are compulsory. Carrying of mobile phone du treated as case of unfair means. Missing data, if any, can be appropri	
1(a) For an 8086 microprocessor, determine the memory address accesses instructions. (DS=1000H, SS=2000H, SP=0300H, BP=0200H, SI=0500H, SI=05000H, SI=0500H,	ed by each of the following 00H, and DI=0800H.) (2)
(i) MOV [SI+100H], AX (ii) MOV DX, [B	P∉Di +200 H]
(iii) ADD [DI], 2 (iv) PUSH AX	
(b) With a neat sketch explain the architecture of 8086 microprocessor	(3)
2(a) The content of DX = 371FH, Carry Flag = 0 and CL = 03H. What the execution of each instruction?	will be content of DX after (2)
(i) SAR DX, CL (ii) SHL DX, 2 (iii) RCR DX, CL (iv) RA	AR DX, 4
(b) What is the difference between SHORT JMP, NEAR JMP and I using a diagram clearly show the corresponding jump locations.	FAR JMP instructions? By (3)
3(a) Differentiate between the following 8086 instructions:	(2)
(i) TEST and AND (ii) MOV and MOVSB	
(b) Draw the block diagram and explain the working of each sections	of 8284A clock generator. (3)
4. Develop a sequence of instructions that adds the 8-digit BCD number digit BCD number in CX and DX. (AX and CX are the most sign must be found in CX and DX after the addition.)	
5. Write an inline assembly language program inside the C main func	tion to read temperature in
degree Fahrenheit from a keyboard, convert to degree Celsius and d	
DOS interrupts for reading from keyboard and displaying on the scree	en. (5)