Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-V • EXAMINATION – SUMMER • 2015

Subject Code: 150701 Date: 02-05-2 Subject Name: Advanced Processors)15	
Time Instru	e: 02.30 ctions:) pm - 05.00 pm Total Marks: 70		
	 At Ma Ma Fig 	tempt all questions. ake suitable assumptions wherever necessary. gures to the right indicate full marks.		
Q.1	(a)	Answer the following questions1. What are the advantages of segmentation in 8086?	02	
		2. Which 8086 registers are used as memory pointer? Explain the use of memory pointer registers in 8086?	02	
		3. If the Code segment register contains 5000H and the instruction pointer register contains 2400H.What is the physical address?	01	
	(b)	 What are the controlling flags in 8086? Explain in detail. Briefly explain following directives with example 	02	
		EVEN, DD, SEGMENT 2. Briefly explain following instructions with example	03	
		AAM, DIV, XLAT and CBW	04	
Q.2	(a)	Write an assembly level programme that averages two values of 16-bit number present in the memory location 3000:0100 and 3000:0102. Store the result in the next memory location	07	
	(b)	If BX=0158h, DI=10A5h, DS=2100h and DS is used as segment register. Explain and calculate effective address and physical address for following addressing modes. Also identify addressing mode used in the instruction MOV AL,[BX] MOV DX,[BX][DI] MOV DX,[BX]+1B57h MOV AX,[BX][DI]+1234h	07	
	(b)	Write an assembly level programme that will find out the number of even and odd numbers from a given series of 16 bit numbers.	07	
Q.3	(a)	Explain following 1. Explain the differences between near and far procedure	02	
		2. Explain the differences between Macro and Procedure	02	
		3. Explain the interrupt response sequence of the 8086 microprocessor.	03	
	(b)	What are the differences between minimum mode and maximum mode operation of 8086? Draw minimum mode system with RAM, ROM and I/O port.	07	
02	(a)	OR Priefly avalain respond of 2006 when it reasing sized on had-	07	
Q.3	(a)	interrupt pin NMI and INTR.	U7	

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- (b) Draw and explain memory read machine cycle of 8086 in minimum mode. 07 Briefly explain ODD and EVEN bank concept in 8086.
- Q.4 (a) Briefly explain six functional units of internal architecture of 80386. 07 Explain register structure of 80386.
 - (b) Explain the physical address formation in protected mode of the 80386 07 with reference to paging and without paging

OR

- Q.4 (a) Briefly explain segment descriptor and call gate descriptor in 07 80386.Breifly explain use of call gate descriptor
- Q.4 (b) Briefly explain task state segment (TSS) and task register (TR) in 80386.O7 Briefly explain different ways of task switching in 80386.
- Q.5 (a) Compare real mode, protected mode and virtual 8086 mode in 07 80386.Briefly explain interrupt handling in Protected mode.
 - (b) 1. Explain the advanced features of 80486 compared to 80386. 03
 - 2. Explain the advanced features of Pentium processor 04

OR

- Q.5 (a) Briefly explain superscalar architecture, Hyper thread technology and core 07 2 duo technology in Intel P6 family processor
 - (b) Compare CISC and RISC architecture. Briefly explain Register window in **07** SUNSPARC.
