

SIDDHARTH GROUP OF INSTITUTIONS:: PUTTUR

Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code : MCSD(16EC3807) **Branch & Specialization**: M.Tech – DECS

Regulation: R16 Year & Sem: I-M.Tech & II-Sem

UNIT -I

REVIEW OF 8086 PROCESSOR, THE 80286 MICRO PROCESSORS

1.	(a) Explain the men	nory management	unit of 80286 process	sor.	[5M]
	(b) Explain the inter	rupt handling med	hanism in 80386 pro	cessor.	[5M]
2.	(a) Discuss the featu	ires of 8086 micro	processor.		[5M]
	(b) Explain the mem	nory organization o	of 8086 microprocess	or.	[5M]
3.	What is addressing r	modes? Explain ty	pes of addressing mo	des with an example.	[10M]
4.	(a) What are the diff	ferent between 80	86 and 8088 with the	respect to pin structures?	[5M]
	(b) Explain the follo	owing pin details o	f 8086.		
	(i)INTR (ii)H	IOLD ((iii)TEST	(iv)ALE	[5M]
5.	(a) Explain the salie	nt features of 8028	86 microprocessor.		[5M]
	(b) Explain the associ	ciative memory or	ganization.		[5M]
6.	Draw and Explain th	ne Architecture of	80286 Microprocesso	or.	[10M]
7.	(a) Explain the Class	ssification of Instru	uction set of 80286.		[5M]
	(b) What is Flag reg	ister? Explain in d	letail.		[5M]
8.	(a) Explain bus HOI	LD and HLDA Sec	quence in detail.		[5M]
	(b) Explain the Inter	rupt Acknowledge	e Sequence in detail.		[5M]
9.	Explain the following	ng Additional Instr	ruction in 80286.		[10M]
	i)PUSH Imd ii)PU	USH*A iii)POP	*A iv)IMUL lmd	-oper v)INS	
10.	. (a) Discuss about ad	ldressing modes of	f 80286 microprocess	or with examples.	[5M]
	(b) Explain briefly b	out the instruction	n set of 80286 microp	rocessors.	[5M]

UNIT-II THE 80386 AND 80486 MICRO PROCESSORS, THE PENTIUM AND PENTIUM PRO PROCESSOR

1.	(a) Explain the salient features of 80386 processor.	[5M]
	(b) Discuss the register organization of 80386 processor.	[5M]
2.	(a) Briefly explain the memory management of 80386.	[5M]
	(b) Explain how 80386 moved to protocol mode.	[5M]
3.	(a) Explain the virtual 8086 mode in detail.	[5M]
	(b) Explain the Memory Paging Mechanism in 80386 processor.	[5M]
4.	(a) Explain the Pin definitions of 80386 and 80486.	[5M]
	(b) Draw and Explain the software model of 80486 processor.	[5M]
5.	Draw and explain the internal architecture of 80386 processor.	[10M]
6.	(a) Compare RISC and CISC Computer organizations.	[5M]
	(b) Explain the interrupt processing mechanism in Pentium processor.	[5M]
7.	(a) Explain the Memory System in Pentium processor.	[5M]
	(b) What are Input / Output Systems in the Pentium processor?	[5M]
8.	(a) Discuss the Branch Prediction Logic and cache structure.	[5M]
	(b) Discuss the Features of Pentium pro processor.	[5M]
9.	(a) Classify the Special Pentium Registers in Pentium processor.	[5M]
	(b) Explain the group of pin details in Pentium processor.	[5M]
10.	Draw and explain the internal structure of the Pentium Pro Processor.	[10M]

UNIT III

THE PENTIUM IV AND DUAL CORE MICROPROCESSORS **INTODUCTION TO MULTIPROGRAMMING**

1.	(a) Draw and explain the software model of 80486 processor.	[5M]
	(b) Explain briefly about programmed I/O operations.	[5M]
2.	(a) Explain the salient features of Pentium 4 processor.	[5M]
	(b) Discuss the general purpose instruction for Pentium 4 processor.	[5M]
3.	Draw and explain the architecture for Pentium 4 processor.	[10M]

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4.	(a) What are the various registers available in Pentium 4 processor and explain.	[5M]	
	(b) Explain pin structures of Pentium IV and dual core microprocessor.	[5M]	
5.	Explain the four basic models of Pentium 4 processor.	[10M]	
6.	(a) What is multiprogramming? Explain in detail.	[5M]	
	(b) Explain process management.	[5M]	
7.	(a) What are the three states in the process management system explain them.	[5M]	
	(b) Explain neatly the semaphore operations.	[5M]	
8.	Draw and explain the common procedure sharing .Then how reentrant code shared by more the	han one	
	process.	[10M]	
9.	(a) Explain the memory management system in the multiprogramming.	[5M]	
	(b) Discuss the concept of virtual memory.	[5M]	
10.	Briefly discuss the virtual memory concept of 80286 and other advanced processors.	[10M]	
	<u>UNIT –IV</u>		
	ARITHMETIC COPROCESSOR, MMX AND SIMD TECHNOLOG	HES	
1.	(a) Explain the data formals for arithmetic coprocessor with an example.	[5M]	
	(b) Explain the control register of 8087 arithmetic coprocessor.	[5M]	
2.	Draw and Explain the internal structure of 8087 and advanced coprocessor.	[10M]	
3.	Explain the instruction set of 8087, with an example .	[10M]	
4.	Discuss the following different data formals.		
	a) Singed integer	[4M]	
	b) Binary coded decimal	[3M]	
	c) Floating point	[3M]	
5.	(a) What are the co-processor control instruction and explain.	[5M]	
	(b) Explain the conversion method of from decimal to the floating point.	[5M]	
6.	(a) Discus the salient features of 80x87 architecture.	[5M]	
	(b) Explain the 80x87 co-processor status register.	[5M]	
7.	Explain the following instructions with an example.		
	a) Floating point data transfer.	[3M]	
	b) Integer data transfer instruction.	[3M]	
	c) BCD data transfer instruction.	[4M]	
	Micro Computer System Design	Page 1	

(b) Transcendental operations. [5] 9. Explain the following instruction with an example. [1] 1) FCOM II) FPATAN III) FXTRACT IV) FADD 10. Write short notes on the following. a) Control register of 80x87 arithmetic processor. [5] b) Status registers of 80x87 arithmetic processor. [5] **UNIT V** **8096-**MICROCONTROLLER** 1. (a) Comparison between 8051 and 8096 micro controller. [5] (b) Write the features of 8096 micro controller. [5] (c) Write the features of 8096 micro controller. [5] (d) Write a note on SFRs. [5] 3. (a) Explain the RAM structure of 8096 micro controller. [1] 4. (a) What is conditional and unconditional branching? [5] (b) What is subroutine? Explain with an example [5] 5. (a) What is addressing mode? What are the addressing modes of 8096 with an example? [1] 6. (a) Explain the classification of instruction. [5] (b) What is the difference between signed number arithmetic and unsigned number arithmetic? [5] 7. (a) Describe the following instructions with an example. [1] 1) XOR II) SHR III) JNC IV) Push F V) CMPB 8. (a) Draw and explain the internal architecture of 8096 micro controller. [1] 9. (a) What is interrupt? Explain how interrupt can perform the 8096 micro controller with an example [5] (b) Give a brief note on PSW. [5]	
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10 F. 11 d. 6 H. 1	M]
10. Explain the following:	
(i) Tabulate the interrupt vector locations and their priority levels. [5]	M]
(ii) How will determine the source of interrupt. [5]	M]
Prepared by: P.M.VIJA	YAN.