SEAT No.____ SARDAR PATEL UNIVERSITY

Vallabh Vidyanagar - 388120

[36]

M.Sc. (2ND Semester) Examination - April 2018 Thursday, 12th April, 2018 10:00 AM to 01:00 PM

PS02CINC22 (Instrumentation and Control)

Advanced Microprocessor and Microcontrollers

Maximum Marks: 70

Que 1	appropriate one.	n multiple choice of answers. Choose the m	
1	Bit: Width of Address Bus i	in 8086 Microprocessor.	•
	a) 8	b) 16	*. *
2	c) 20 The Function of Execution Unit	d) 32	
	a) Encoding	b) Decoding	
	c) Processing	d) Calculation	
3 .	When 8086 is Connected in M Assign to Specific Processor is I	Maximum Mode Environment, Some Resources Known As Resources.	Are
	a) Global	b) Common	
-	c) Private		**
4	The Index Register Used To Ho	ld	
	a) Memory Register	b) Offset Addresss	
	c) Segment Memory	d) Offset Memory	
5	Is Implemented Via Hardv	vare.	
	a) INTR	b) NMI	_
	c) Both a) and b) -	d) None of These	• . ••
6	: Unconditionally Transfer	s The Control Of Execution To The Specified Addr	ess.
	a) CALL	b) JUMP	
	c) RET	d) IRET	
7	•	Memory It Is Classified As	
	a) XMega	b) Mega	
	c) Tiny	d) All of These	
8	Arduino Is Available For		
	a) Windows	b) Linux	
	•	d) None of These	

Que 2	Short Questions (Attempt any SEVEN)		[14]
1	Differentiate: JUMP and CALL.		
2	Explain Control Transfer Instructions of 8086.		
3	Explain Function Of Instruction Pointer Register.		
4	Differentiate: Minimum and Maximum Mode Systems In Terms of 8086 Microprocessor.		
5	What is the Function of LOCK Signal In 8086?		
6	What is Interrupt?		
7	How Many Bytes Are Required To Store The Starting Addresses of ISR 0f 8086?		
8	Enlist Arduino - Like Systems.		
9	What Are Arduino Add - Ons (Shields)?		
Que 3	[A]	Explain Addressing Modes Of 8086 With Necessary Examples.	[06]
•	[B]	Write on Software Model of 8086 Microprocessor.	[06]
		OR	
	[B]	Draw and Explain Architecture of 8086 Microprocessor.	[06]
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Que 4	[A]	Give an Account of Minimum Mode Interface Signals of 8086.	[06]
	[B]	Explain Hardware Organization of the Memory Address Space of 8086.	[06]
	CT37	OR	F0.43
	[B]	Write a Note on Maximum - Mode Memory Control Signals.	[06]
Que 5	[A]	Write a Detailed Note on Internal Interrupts.	[06]
Ques	[B]	Discuss Byte Wide Input Ports Operation Using Isolated 1/0 In 8086	[06]
	[12]	Microprocessor.	lool
		OR	
	[B]	Discuss Interrupt Instructions.	[06]
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Que 6	[A]	What is Arduino? List Its Advantages. Discuss Different Types of Arduino Boards.	[06]
	[B]	Enlist Features of ATmega328. Explain Watchdog Timer.	[06]
		OR	
	[B]	What is Structure of Arduino Program? Write Code For RGB Mood Lamp Project.	[06]