Sanjay Ghodawat University, Kolhapur 2018-19

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017 EXM/P/09/01

Year and Program:2018-19 **School of Technology** **Department of CSE SY B.Tech**

Course Code: CST213 **Course Title: Microprocessor & Microcontroller**

Day and Date **End Semester Examination (ESE)** **Semester – III**

Thursday 6 Dec 18 **Time:** **Max Marks: 100**

2:30pm to 5:30pm

Instructions:
1) All questions are compulsory.
2) Assume suitable data wherever necessary.
3) Figures to the right indicate full marks.

		Marks	Bloom's Level	CO
Q.1	**Solve the following**			
a)	What are addressing modes? Explain the addressing modes of 8085 Microprocessor	07	L_3	CO1
	OR			
a)	With a neat block diagram explain the architecture of 8086 Microprocessor	07	L_3	CO2
b)	Explain the different Arithmetic Instruction of 8086 Microprocessor	08		CO2
	OR			
b)	Explain the following i) Flag register or 8085 ii) Logical Instruction of 8085	08	L_3	CO1
Q.2	**Solve the following**			
a)	What is Assemble Directive? Explain any six assembler directives with suitable example	07	L_3	CO2
	OR			
a)	What are one, two and three byte instructions? Write 8085 Assembly language program to multiply two 8 bit numbers.	07	L_3	CO1
b)	Draw and Explain the 8086 Minimum Mode configuration.	08	L_3	CO2
	OR			
b)	Explain the Segment registers of 8086 Microprocessor and calculate the Physical address if Segment address =5378H and Offset address = 6676H	08	L_3	CO2

Q.3		**Solve any Two**			
	a)	Draw & Explain block diagram of 8087 Numeric Data Processor (NDP)	08	L_2	CO3
	b)	i. Explain coprocessor configuration of 8086 ii. Data types of NDP	08	L_2	CO3
	c)	In loosely coupled configuration schemes Explain the different bus allocation methods	08	L_2	CO3
Q.4		**Solve any Two**			
	a)	Draw and Explain 8255A Programmable Peripheral Interface(PPI)	09	L_3	CO4
	b)	What is DMA? Explain the general structure of DMA controller	09	L_3	CO4
	c)	Explain block diagram of 8251 serial communication interface.	09	L_3	CO4
Q.5		**Solve any Two**			
	a)	Draw and Explain Architectural block diagram of 8051 Microcontroller	09	L_3	CO5
	b)	Explain the Memory organization 8051 Microcontroller	09	L_3	CO5
	c)	What are the features of 8051 Microcontroller? Give the comparison of Microprocessors and Microcontrollers	09	L_3	CO5
Q.6		**Solve any Three**			
	a)	Write a 8051 program to store data FFH into RAM memory locations 50H to 58H using i) Direct addressing ii) Indirect addressing	06	L_2	CO5
	b)	Explain the Interrupt Enable(IE) and Interrupt Priority(IP) register 0f 8051 Microcontroller	06	L_2	CO5
	c)	Explain the Timer/Counters of 8051 Microcontroller	06	L_2	CO6
	d)	Write an 8051assembly language program to generate 3 ms delay. The clock frequency is 8051 is 16 MHz	06	L_2	CO6

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