



Enrollment No.....

Faculty of Engineering
 End Sem (Odd) Examination Dec-2017
 CS3CO07 Micro Processor & Interfacing
 Programme: B.Tech. Branch/Specialisation: CS
Duration: 3 Hrs. Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. A microprocessor is ALU 1
 (a) And control unit on a single chip.
 (b) And memory on a single chip.
 (c) Register unit and I/O device on a single chip.
 (d) Register unit and control unit on a single chip.
- ii. Output of the assembler in machine codes is referred to as 1
 (a) Object program (b) Source program
 (c) Macroinstruction (d) Symbolic addressing
- iii. What is SIM? 1
 (a) Select interrupt mask. (b) Sorting interrupt mask.
 (c) Set interrupt mask. (d) None of these.
- iv. In order to compliment the lower nibble of accumulator one can use 1
 (a) ANI 0FH (b) XRI 0FH (c) ORI 0FH (d) CMA
- v. In 8085 microprocessor system with memory mapped I/O, which 1
 of the following is true?
 (a) Devices have 8-bit address line
 (b) Devices are accessed using IN and OUT instructions
 (c) There can be maximum of 256 input devices and 256 output devices
 (d) Arithmetic and logic operations can be directly performed with the I/O data
- vi. Which one of the following ICs is used to interface Keyboard and 1
 Display?
 (a) 8251 (b) 8279 (c) 8259 (d) 8253
- vii. The number of hardware interrupts present in 8085 are 1
 (a) 5 (b) 8 (c) 16 (d) 10

- viii. The cycle required to fetch and execute an instruction in 8085 1
 microprocessor is which one of the following
 (a) Clock cycle (b) Memory cycle
 (c) Machine cycle (d) Instruction cycle.
- ix. The operations executed by two or more control units are referred as 1
 (a) Micro-operations (b) Macro-operations
 (c) Multi-operations (d) Bi control-operations
- x. Intel core2 Duo is a _____bit processor. 1
 (a) 8 bit (b) 16 bit (c) 32 bit (d) 64 bit

- Q.2 i. Specify the size of data, address, memory word and memory 2
 capacity of 8085 microprocessor.
- ii. Draw the block diagram of 8086 microprocessor and explain each 8
 block.
- OR iii. Sketch and explain the block diagram of 8085 microprocessor. 8
- Q.3 i. Define stack and stack related instructions. 2
 ii. List out the five categories of the 8085 instructions and explain two 8
 examples of instruction for each group.
- OR iii. What are addressing modes? Explain different types with 8
 examples. Write a program to find the largest out of ten numbers.
- Q.4 i. Suggest an arrangement to interface 8K X 8 size of ROM to 3
 8085, specify the address range.
- ii. Draw and explain the block diagram of 8255 PPI. 7
- OR iii. Write a note on 8253 programmable interval timer. 7
- Q.5 i. Mention the number of machine cycles and T states in one byte two 4
 byte and three byte instruction.
- ii. With timing diagram explain the memory read operation in 8085. 6
- OR iii. Explain vectored and non-vectored interrupts of 8085. 6
- Q.6 i. Write in brief about Intel quick path interconnect. 2
 ii. Write a note on Intel Core 2 duo processor. 8
- OR iii. Write a note on Intel Core i 7 Processor. 8

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Marking Scheme

Q.1	i.	A microprocessor is ALU (d) Register unit and control unit on a single chip.	1				
	ii.	Output of the assembler in machine codes is referred to as (a) Object program	1				
	iii.	What is SIM? (c) Set interrupt mask.	1				
	iv.	In order to compliment the lower nibble of accumulator one can use (b) XRI 0FH	1				
	v.	In 8085 microprocessor system with memory mapped I/O, which of the following is true? (d) Arithmetic and logic operations can be directly performed with the I/O data	1				
	vi.	Which one of the following ICs is used to interface Keyboard and Display? (b) 8279	1				
	vii.	The number of hardware interrupts present in 8085 are (a) 5	1				
	viii.	The cycle required to fetch and execute an instruction in 8085 microprocessor is which one of the following (d) Instruction cycle.	1				
	ix.	The operations executed by two or more control units are referred as (b) Macro-operations	1				
	x.	Intel core2 Duo is a _____ bit processor. (d) 64 bit	1				
Q.2	i.	Size of data, address, memory word and memory capacity of 8085 microprocessor 0.5 mark each (0.5 mark * 4 = 2 marks)	2				
	ii.	Diagram of 8086 microprocessor – 4 marks Explanation – 4 marks	8				
OR	iii.	Block diagram of 8085 microprocessor – 4 marks Explanation – 4 marks	8				
Q.3	i.	Definition – 1 mark Instructions – 1 mark	2				
	ii.	Categories of the 8085 instructions - 4 marks Examples of instruction – 4 marks	8				
OR	iii.	Definition of addressing modes – 2 marks Types with examples – 3 marks Program - 3 marks	8				
Q.4	i.	Arrangement to interface 8K X 8 size of ROM to 8085 – 1 mark Address range – 2 marks	3				
	ii.	Block diagram of 8255 PPI – 3 marks Explanation – 4 marks	7				
OR	iii.	Diagram of 8253 programmable interval timer – 3 marks Explanation – 4 marks	7				
Q.5	i.	Mention the number of machine cycles and T states in one byte two byte and three byte instruction 1.25 for each	4				
	ii.	Diagram of memory read operation in 8085 – 4 marks Explanation – 2 marks	6				
OR	iii.	Vectored and non-vectored interrupts of 8085 – 3 marks each (3 marks * 2 = 6 marks)	6				
Q.6	i.	Definition and a bit explanation	2				
	ii.	Intel Core 2 duo processor. Definition and features – 3 marks Explanation – 5 marks	8				
OR	iii.	Intel Core i 7 Processor. Definition and features – 3 marks Explanation – 5 marks	8				
