

University of Mumbai

Examination 2020

Program: EXTC

Curriculum Scheme: Rev2016

Examination: TE Semester V

Course Code ECC501 and Course Name: Microprocessor & Peripherals Interfacing

Time: 2 hours

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	8255 consists of _____ 8-bit bidirectional I/O ports
Option A:	2
Option B:	3
Option C:	4
Option D:	5
2.	Specify the addressing mode for the instruction: MOV AX,[BX+ 1004H]
Option A:	Immediate Addressing
Option B:	Register Addressing
Option C:	Direct Addressing
Option D:	Register Relative Addressing
3.	Which pin is used to indicate use of odd/higher memory bank?
Option A:	ALE
Option B:	BHE
Option C:	DIR
Option D:	VCC
4.	Which pin is used to enable latch to hold on the content of address lines?
Option A:	ALE
Option B:	BHE
Option C:	DIR
Option D:	VCC
5.	8086 is a _____ bit microprocessor.
Option A:	8
Option B:	16
Option C:	32
Option D:	64
6.	What is not present inside the microprocessor?
Option A:	ALU
Option B:	Control Unit
Option C:	Registers
Option D:	I/O devices
7.	Banking of memory leads to

Option A:	increase in data access speed
Option B:	decrease in data access speed
Option C:	increase in humidity
Option D:	decrease in temperature
8.	Physical address is calculated by
Option A:	physical address = (starting address * 10) + offset address
Option B:	physical address = (starting address * 20) + offset address
Option C:	physical address = (starting address * 10H) + offset address
Option D:	physical address = (offset address * 10 H) + starting address
9.	The instruction pointer is default pointer of
Option A:	code segment register
Option B:	data segment register
Option C:	stack segment register
Option D:	extra segment register
10.	Destination index is a default pointer of
Option A:	code segment register
Option B:	data segment register
Option C:	stack segment register
Option D:	extra segment register
11.	Maximum size of a memory segment is ____ kB
Option A:	64
Option B:	32
Option C:	48
Option D:	16
12.	Total number of interrupts in 8086 is
Option A:	32
Option B:	64
Option C:	128
Option D:	256
13.	All I/O data transfers using IN and OUT instructions use ____ register
Option A:	A
Option B:	B
Option C:	C
Option D:	D
14.	If carry is generated out of lower nibble then ____ flag is set.
Option A:	Carry
Option B:	Parity
Option C:	Auxiliary Carry
Option D:	Interrupt
15.	To configure 8086 in minimum mode, MN/MX' pin should be connected with

Option A:	VCC
Option B:	GND
Option C:	Keep open
Option D:	INTR pin
16.	_____ is used to exchange a byte/word between source and destination given in instruction.
Option A:	XLAT
Option B:	MOV
Option C:	PUSH
Option D:	XCHG
17.	Identify an invalid logical instruction for 8086.
Option A:	AND
Option B:	OR
Option C:	XNOR
Option D:	XOR
18.	After the execution of SHL & SHR instructions, the empty bits are filled with_____
Option A:	0
Option B:	1
Option C:	last bit is copied
Option D:	randomly filled
19.	NOP stands for
Option A:	No operation performed
Option B:	Number of operations performed
Option C:	number of operations not performed
Option D:	none of these
20.	INT 0 is dedicated to _____ interrupt.
Option A:	NMI
Option B:	Overflow
Option C:	divide by 0 error
Option D:	single stepping

Q2	Solve any Two Questions out of Three	10 marks each
A	Explain 8086 Interrupt structure.	
B	Write an assembly language program to interface DAC with 8086 to generate triangular waveform.	
C	Explain 8086-8087 interfacing.	

Q3		
A	Solve any Two	5 marks each

i.	Explain minimum mode of 8086.
ii.	Explain block diagram of microprocessor based system.
iii.	Explain Addressing modes of 8086.
B	Solve any One 10 marks each
i.	Explain different modes of 8255.
ii.	Interface 64Kb RAM using 32Kb memory chips and 16Kb ROM using 8 Kb chips to 8086.