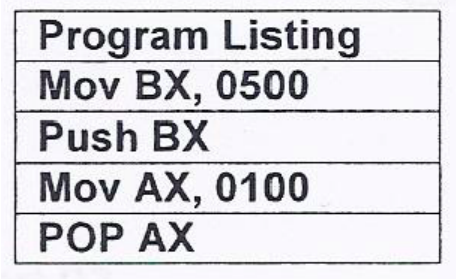
F2011 – EEE 174 Exams

1. Given the short code, what is the value in AX after the program is run?



Program Listing
Mov BX, 0500
Push BX
Mov AX, 0100
POP AX

0500

2. A "pull down" resistor is used in digital circuits to do what?
To keep the signal line "tied" low until the line is active (goes high)

4. Ladder Logic is used in?
PLCs

5. If CX is 0001, what will CX be after a "LOOPNZ" instruction?
0000

6. If the SP is F00F, what is the SP value after a "POP CX" instruction?
F011

7. The acronym PWM used for motor control, is defined as which of the following?
Pulse Width Modulation

8. How many bit(s) is/are required to represent a range of decimal numbers from 0 to 9?
4

9. In the PIC18 with TRISD = 0b01000000, what is the configuration of the port D?
Bit 7 of port D is set to input

10. Which of the following is not a valid command for a number into a register in MASM?
MOV AX,BADH

11. You are trying to rebuild a HELLO project in MASM and you get the following error: "LINK : warning L4021: no stack segment". What would be the reason for such an error?
No project template for COM was selected

12. What flag(s) does the "LOOPNE" instruction look at to determine whether to loop or not?
ZF

13. In the propeller microcontroller, the command “dira[4..9] := %000000” would cause the processor to do which of the following?
Sets the propeller pins P4 through P9 as input pins

14. What command in MASM-CodeView would be used to step through a program line by line?
T (F8)

17. In MASM, with a “MOV CX, 18h” instruction, and a “LOOP” instruction, in decimal how many times will the program loop?
24

18. A “PUSH” instruction:
Decrements the SP

19. In the Hello MASM lab in the original code, what is the address of the byte used to start the number in the sequence “Hello World 0”?
020E

20. In the propeller microcontroller, the command “waitcnt(clkfreq^5 + cnt)” would cause the processor to do which of the following?
A 5 second delay

21. ADD’ing 10H and 2FH will result in which of the following?
3F

22. A “pull up” resistor is used in digital circuits to do what?
To keep the signal “tied” high until the line is active (goes low)

23. With a POPA instruction, what will be the order of the accumulator, base, count, and data registers restored from the stack?
BDCA

24. In the propeller microcontroller, the term “Method” is(are) which of the following?
A block of executable commands that has variables, can receive parameters, and returns a value

25. If the SP is F00F, what is the SP value after a “PUSH DX” instruction?
F00D

27. What type of program is this?
AX=0000 BX=0000 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=1376 ES=1376 SS=1376 CS=1376 IP=0115 NV UP EI PL NZ NA PO NC
1376:0115 0100 ADD [BX+SI], AL DS: 0000=CD
COM

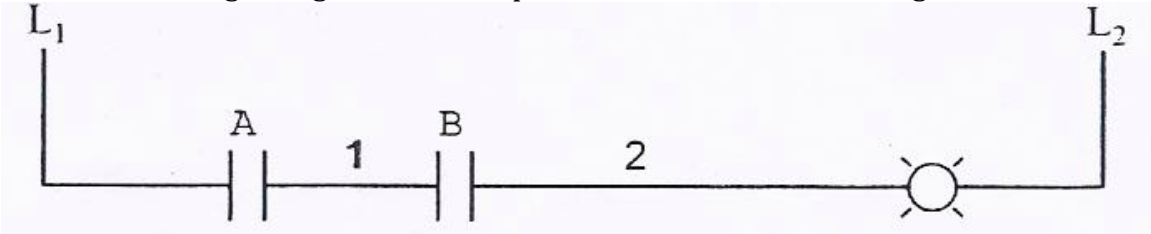
29. What is -34 decimal in 2's complement (8 bits)?
1101 1110

32. In the propeller, how many values does a method return?
1

33. AND'ing 10H and 2FH will result in which of the following?
0

34. In the propeller microcontroller, the command "dira[4..9] := %000000" would cause the processor to do which of the following?
Sets the propeller pins P4 through P9 as input pins

35 The ladder logic diagram would represent which of the following?



AND

36. Which of the following is a valid x86 command for multiplying a number?
MUL BX

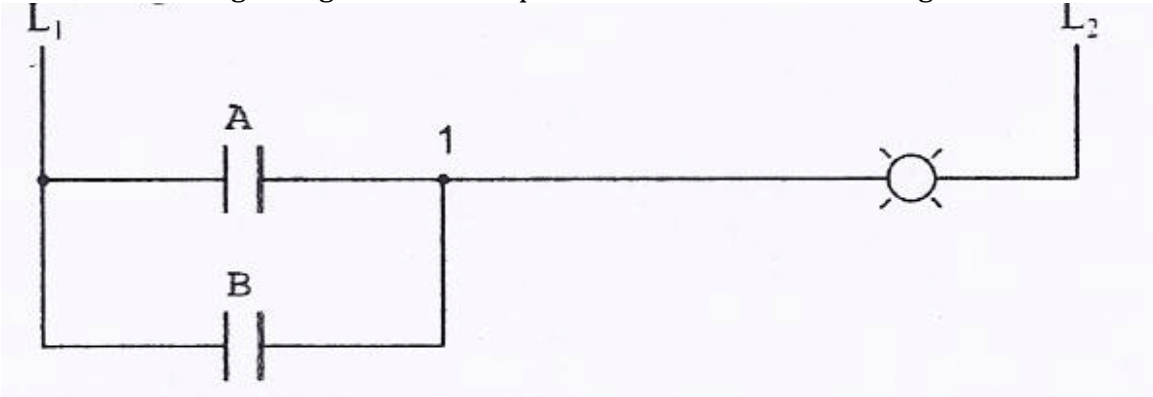
37. The instruction MOV CX, [SI] is what addressing mode?
Register indirect

38. On the PPE board, what number(s) on the key pad is(are) pressed for an output port value of 02h and an input port value of 2Fh?
5

39. In MASM, with a "MOV CX, 24" instruction, and a "LOOP" instruction, how many times will the program loop in decimal?
24

40. The letters "NC" labeled on relays and PLCs means which of the following?
Normally closed

41. The ladder logic diagram would represent which of the following?



OR

42. If you want to use a INT software interrupt function to print a string out to the screen, what is the function code, start pointer, termination character, and interrupt you need to use?
ah = 09h, ds:dx, "$", 21h

PART1-2-3-4-5-6

2. How many flip flops would be required for a 9 state, State Machine?
4

3. If 10Hex is XNOR with 2FHex would result in which of the following Decimal numbers?
C0

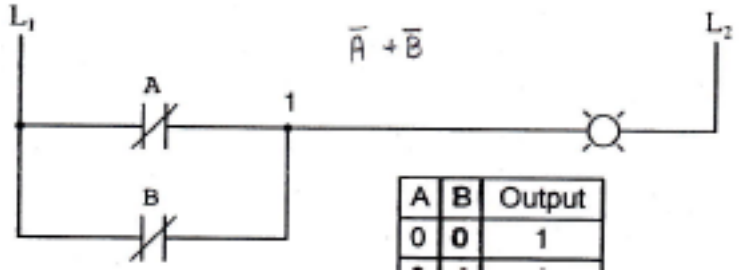
4. A Mealy state machine:
The output depends on input and the current state; the next state depends on input and current state.

5. A "pull up" resistor is used in digital circuits to do what?
To keep the signal "tied" high until the line is active (goes low)

6. How many bits would be required to count from 0 to 511 in binary?
9

7. 36 decimal would be what value in hexadecimal?
24

8. The ladder logic diagram would represent which of the following?



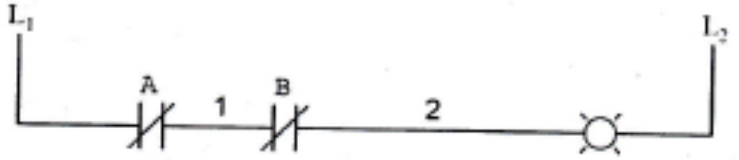
NAND

9. What is the difference between a half adder and a full adder?
The half adder is missing a carry in

10. Which gate would be used for the function, F= /C/D + CD?
XNOR

12. A Moore state machine:
The output depends on the state, the next state depends on input and current state.

13. The ladder logic diagram would represent which of the following?



NOR

14. The number of bytes needed for a 32 bit number are:
4

15. How many bits would be required to count from 0 to 1023 in binary?
10

16. What is the signed decimal value of the hex number, FFF0?
-16

17. In the truth table shown; how many Karnaugh maps would be required to solve the truth table?

	Input				Output			
	A	B	C	D	W	X	Y	Z
0	0	0	0	0	0	0	1	1
1	0	0	0	1	0	1	0	0
2	0	0	1	0	0	1	0	1
3	0	0	1	1	0	1	1	0
4	0	1	0	0	0	1	1	1
5	0	1	0	1	1	0	0	0
6	0	1	1	0	1	0	0	1
7	0	1	1	1	1	0	1	0
8	1	0	0	0	1	0	1	1
9	1	0	0	1	1	1	0	0

4

18. In the truth table shown; in mapping values into the karnaugh map what value would be assigned to the states A to F?

	Input				Output			
	A	B	C	D	W	X	Y	Z
0	0	0	0	0	0	0	1	1
1	0	0	0	1	0	1	0	0
2	0	0	1	0	0	1	0	1
3	0	0	1	1	0	1	1	0
4	0	1	0	0	0	1	1	1
5	0	1	0	1	1	0	0	0
6	0	1	1	0	1	0	0	1
7	0	1	1	1	1	0	1	0
8	1	0	0	0	1	0	1	1
9	1	0	0	1	1	1	0	0

X or d for don't care

19. A "pull down" resistor is used in digital circuits to do what?
To keep the signal line "tied" low until the line is active (goes high)

21. In the truth table shown; how may Karnaugh maps would be required to solve the truth table?

A	B	C	D	a	b	c	d	e	f	g
0	0	0	0	1	1	1	1	1	1	0
0	0	0	1	0	1	1	0	0	0	0
0	0	1	0	1	1	0	1	1	0	1
0	0	1	1	1	1	1	1	0	0	1
0	1	0	0	0	1	1	0	0	1	1
0	1	0	1	1	0	1	1	0	1	1
0	1	1	0	1	0	1	1	1	1	1
0	1	1	1	1	1	1	0	0	0	0
1	0	0	0	1	1	1	1	1	1	1
1	0	0	1	1	1	1	1	0	1	1
to All other inputs				0	0	0	0	0	0	0

7

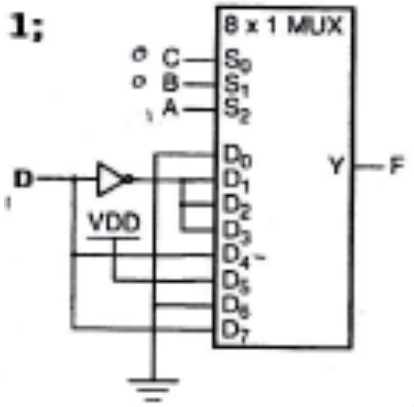
22. In the truth table shown; in mapping values into the Karnaugh map what value would be assigned to the states 10 to 15?

	Input				Output			
	A	B	C	D	W	X	Y	Z
0	0	0	0	0	0	0	1	1
1	0	0	0	1	0	1	0	0
2	0	0	1	0	0	1	0	1
3	0	0	1	1	0	1	1	0
4	0	1	0	0	0	1	1	1
5	0	1	0	1	1	0	0	0
6	0	1	1	0	1	0	0	1
7	0	1	1	1	1	0	1	0
8	1	0	0	0	1	0	1	1
9	1	0	0	1	1	1	0	0

0

23. If 10Hex is ADDed to 2FHex would result in which of the following Hex numbers?
3F

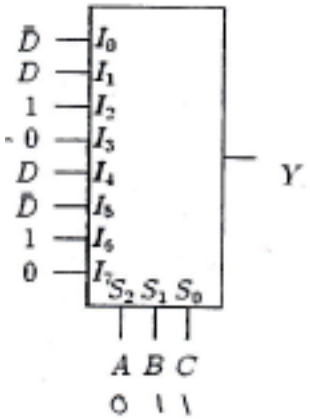
24. In 8 to 1 Multiplexer show, if A = 1, B = 0, C = 0, D = 1; what would the output be equal to?



1

25. Given a 4 bit adder with carry out, S4, adding two four bit numbers A and B. If A= 8 and B = 8, what would the values of S4, S3, S2, S1, S0 be?
10000

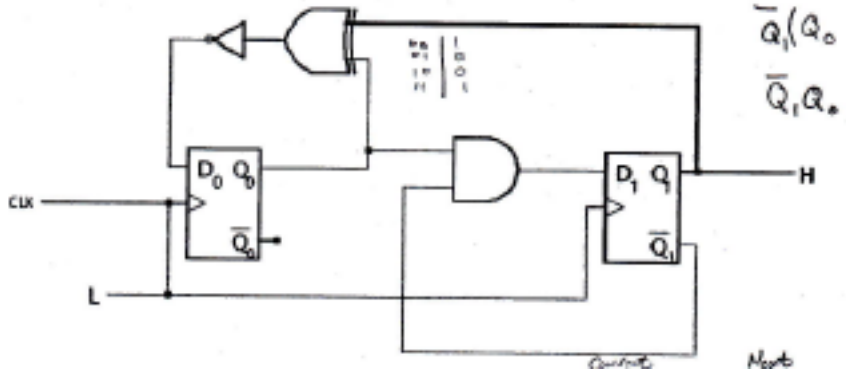
26. In 8 to 1 multiplexer shown, with A=0, B = 1, C = 1; what would the value of output Y be equal to?



0

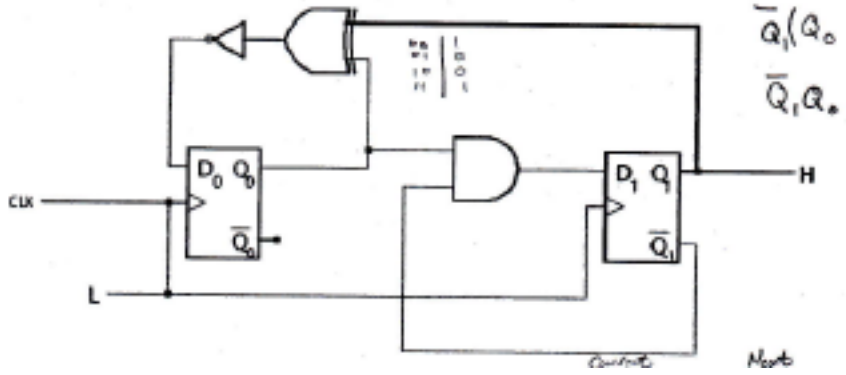
27. What would 6A Hex equal in base 10?
106

28. For the circuit shown, what is the equation for the next state of Q1?



Q0/Q1

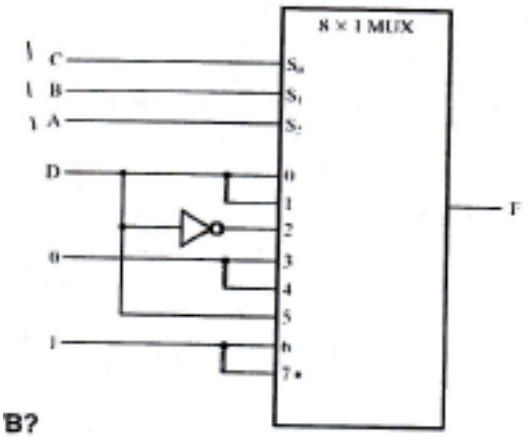
29. What will this circuit do?



Divide by 3

30. If Q1 is 1 and Q0 is 0, what is the next state of Q1 and Q0?
00

32. In 8 to 1 multiplexer shown, with A=1, B=1, C=1; what would the value of output F be equal to?

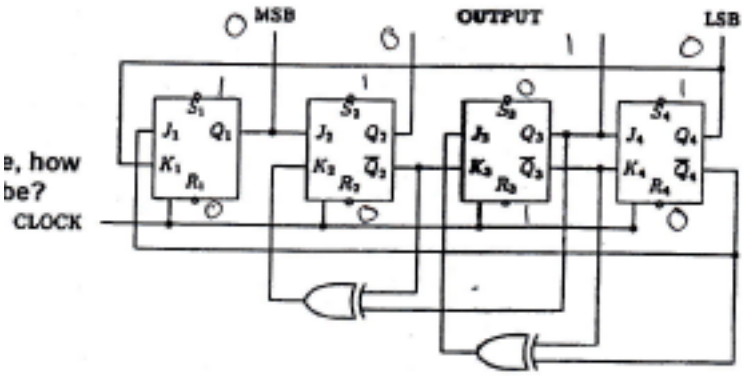


B?
1

33. 0F in 2's complement equals (8 bits) _____ in base 10.
-14

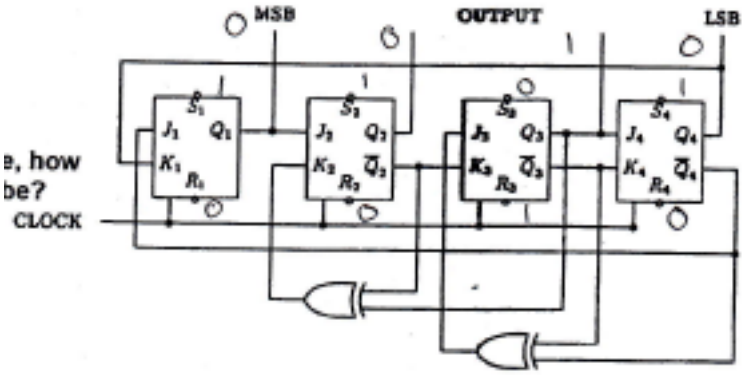
34. Which gate would be used for the function, F = /AB + A/B?
XOR

35. For the flip flops in the circuit diagram notice that set and reset are active low. If S1=1, R1=0, S2=1, R2=0, S3=0, R3=1, S4=1, R4=0; what is the output of the counter in hexadecimal?



2

36. If S and R are in their inactive state, how many possible states could there be?



16

exam2

1. A “PUSH” instruction:
Decrements the SP

2. If CX is 0000, what will CX be after a “LOOP” instruction?
FFFF

3. You are trying to rebuild a HELLO program project in MASM and you get the following error: “ERROR 4 line 1”. What is the cause of the error?
Not known-this error by itself isn’t a problem, press the enter key to clear the error

4. In MASM, with a “MOV CX, 18” instruction, and a “LOOP” instruction, in decimal how many times will the program loop?
18

5. You are trying to rebuild a HELLO project program in MASM and you get the following error: “LINK : warning L4021: no stack segment”. What would be the reason for such an error?
No project template for COM was selected

6. In the Hello MASM lab in the original code, what is the address of the byte used to start the string in the sequence “Hello World 0”?
0200

7. What is 14.4375 base 10 in binary?
001110.01110

8. How many bit(s) is/are required to represent a range of numbers from 0 to 63?
6

9. What type of program is this?
AX=0000 BX=0000 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=1376 ES=1376 SS=1376 CS=1376 IP=0100 NV UP EI PL NZ NA PO NC
1376:0100 0100 ADD [BX+SI],AL DS:0000=CD
COM

10. What command in DEBUG would be used to change the code segment?
RCS

11. This section of memory represents a stack. What type of program is this?
BEEF:FFD0 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00
BEEF:FFE0 00 01 02 03 04 05 06 07-08 09 0A 0B 0C 0D 0E 0F
BEEF:FFF0 11 22 33 44 55 66 77 88-99 AA BB CC DD EE FF
COM program

12. Determine the contents of register BL after the following instructions have been executed:

Program Listing
MOV BL, E2H
MOV CL, 1000b
ROL BL, CL

E2H

13. What Hex values must be sent to address the key pad rows on the PPE board?
1, 2, 4, 8

14. The ASCII codes for space, space, carriage return, line feed, end of string in hexadecimal are:
20, 20, 0D, 0A 24

15. Which of the following is a valid x86 command for multiplying a number?

Program Listing
Mov BX, 0500
Push BX
Mov AX, 0100
POP AX

MUL BX

16. What command in MASM-CODEView would be used to step through a program line by line?
T (F8)

17. Given the short code, what is the value in AC after the program is run

Program Listing
Mov BX, 0500
Push BX
Mov AX, 0100
POP AX

0500

18. A "POP" instruction:
increments the SP

19. A "NOP" instruction in a program will:
Perform a No Operation

20. What is the numeric sequence of the key pad columns on the PPE board used in the lab?
37, 2F, 1F

21. For the instruction sequence below, determine the contents of the register AL after this program is executed:

Program Listing
MOV AL, 93h
ADD AL, 69h
DAA

62H

22. Which of the following is not a valid command for a number into a register in MASM?
MOV AX, F8ADH

23. On the PPE board, what number(s) on the key pad is(are) pressed for an output port value of 04h and an input port value of 2Fh?
8

24. AND'ing 20H and 1FH will result in which of the following?
0

25. With a POPA instruction, what will be the order of the accumulator base, count, and data registers restored from the stack?
BDCA

26. If the SP is F00F, what will the SP value be after a "PUSH CX" instruction?
F00D

The number of nibbles in a double word are:
8

If you want to use a DOS software interrupt function to print a string out to the screen, what s the function code, start pointer, termination character, and interrupt you need to use?
Ah=09h, ds:dx, "$",21h

If CS=2DF6h and IP=0BADh, compute the physical address of the next 8086 instruction fetch?
2EB0Dh

The instruction in listing 2 , outputs ___ consecutive bytes of memory

Listing 2
STD
MOV CX, 500H
MOV DX, 100H
MOV SI, 250H
A1: LODSB
OUT DX, AL
LOOP A1

500h

Determine the contents of register AL, after following instructions have been executed:

Listing 3	
MOV AL, E2H	
MOV CL, 4H	
ROR AL, CL	

2EH

Refer to listing 4. What does this code do?

Listing 4	
MOV	DX, 0F010h
MOV	SI, 1001h
MOV	CX, 0Fh
CLD	
REP	OUTSB

Outputs bytes from DS:1001 through DS:100F to I/O port 0F010h

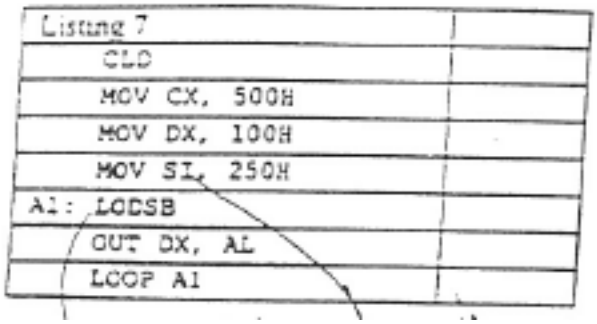
If the current values in the stack segment register and stack pointer are EO00h and IA00h respectively, what is the memory address of the top of the stack?
E1A00h

If CS=2DF6h and IP=0BADh, compute the physical address of the next 8086 instruction fetch.
2EB0Dh

If you want to use a DOS software interrupt function to terminate closing all open files, what is the function code, start pointer, termination character, and interrupt you need to use?
Ah= 4ch, AL error code, none, 21h

The LOOPNE instruction performs which of the following?
Decrements CX, tests the ZF flag, if it is not zero jumps to address specified

Assuming DS=F000h, the instruction sequence in listing 7 below takes the last byte in the transfer from memory at



F0750h

Which of the following register values within the program loop will cause the program in listing 7 to stop looping?
CX = 1

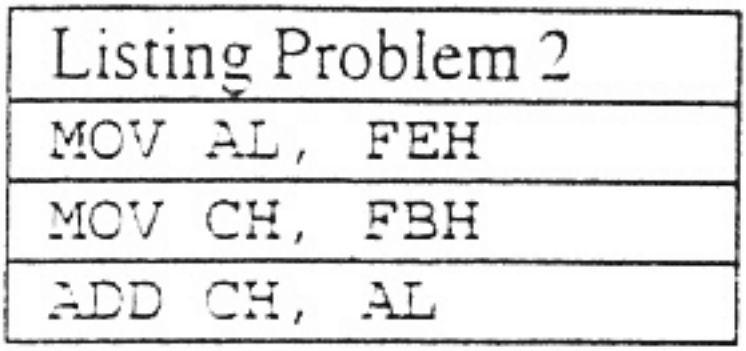
The instruction MOV CX, [SI] is what addressing mode?
Register Indirect

The IN&OUT instructions can only transfer data between an I/O port and the _____ register.
Al, ax, or eax

The 80x86 processors have two general-purpose hardware interrupts called _____ and _____. Of these, interrupts on _____ can be bloced by giving the _____ instruction.
INTR, NML, INTR, CLI

What is the binary value of -128?
1000 0000

What is the status of overflow flag, carry flag, and signal flagm after the following program is run?



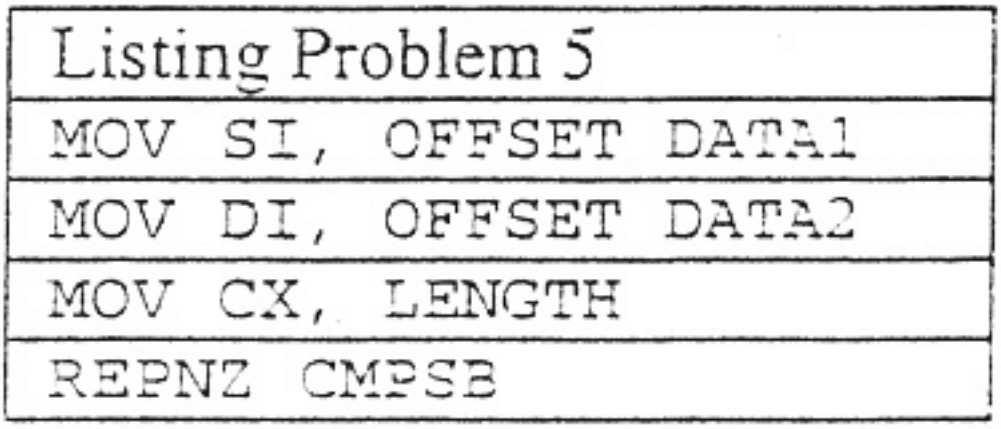
Listing Problem 2
MOV AL, FEH
MOV CH, FBH
ADD CH, AL

0, 0, 1

In string operations, register _____ is used to point to the source operand and register ____ is used to point to the destination operand.
SI, DI

The ____ flag, bit ____ of the register, is used to tell the CPU whether to increment or decrement pointers in repeated string operations.
Directional flag, bit 11

In the following program segment, what condition will cause the REPNZ to fail?



Listing Problem 5
MOV SI, OFFSET DATA1
MOV DI, OFFSET DATA2
MOV CX, LENGTH
REPNZ CMPSB

When CX=0 or the point at which DATA1 or DATA2 are not equal

What is the numeric sequence to address the key pad rows on the PPE board used in the lab?
1, 2, 4, 8

When using DOS Debug, which command is used to execute INT instructions (to keep from changing the Code Segment)?
P

What must the value be and in what register, prior to executing a LOOPNE instruction, to discontinue looping?
CX=1

The ASCII codes for carriage return and line feed are:
0Dh, 0Ah

With a POPA instruction, what will be the order of the registers A-D restored from the stack?
BDCA

What is 9.75 in binary?
1001.1100

What is 0.078125 in short real Floating Point single precision format?
3D A0 00 00

Double-precision IEEE FP standard uses _____ bits to represent data.
64

What is the decimal vale of 41 1C 00 00 in IEEE signal precision FP format?
9.75

The number of nibbles in a Double-Precision IEEE FP number are:
16

What are the contents of BL, BH, BX, and EBX after the execution of the instruction, "MOV EBX, 99FF77AAH:
AA, 77, 77AA, 99FF77AA

What are the contents of BX after this program:

Listing for problem 17		Memory Location	Contents
MOV BX, 8002h		8003	4E
MOV AX, 3C7Ah		8002	24
ADD [BX], AX		8001	F2
DAA		8000	39

8002h

Determine the contents of register AL after the following instructions have been executed:

Listing for Problem18
MOV AL, 2EH
MOV CL, 8H
ROR AL, CL

2EH

With a PUSHA instruction, what will be the order of the register (register A-D) contents on the stack?
ACDB

The numbers of nibbles in a word are:
4

The instruction sequence in the listing, outputs ____ consecutive bytes of memory.

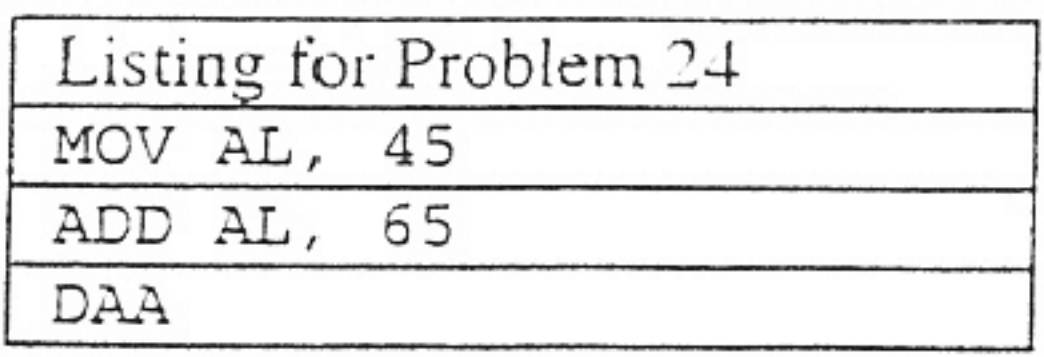
Listing for problem 21
STD
MOV CX, 250H
MOV DX, 100H
MOV SI, 500H
A1: LODSB
OUT DX, AL
LOOP A1

250h

Assuming DS=1000h, the instruction sequence in listing 2 takes the byte in the transfer from memory at:
10250h

The LOOPNE instruction performs which of the following?
Decrements CX, tests the ZF flag, if it is not zero jumps to address specified

For the instruction sequence below, determine the contents of the register AL after this program is executed:



Listing for Problem 24
MOV AL, 45
ADD AL, 65
DAA

10H

The IN & OUT instructions can only transfer data between an I/O port and the _____ register.
AL, AX, or EAX

TEST#2

1. Determine the contents of the register BL after the following instructions have been executed:

Program Listing
MOV BL, 2EH
MOV CL, 0100b
ROL BL, CL

E2H

2. What Hex values must be sent to address the key pad rows on the PPE board?
1, 2, 4, 8

3. With a POP BX instruction, what will be the order of the accumulator, base, count, and data registers restored from the stack?
BX

4. What is -1011.0101 base 2 in decimal?
-11.31

5. If CX is 0000, what will CX be after a “LOOP” instruction?
FFFF

6. How many bit(s) is/are required to represent a range of numbers from 0 to 255?
8

7. What is 16.4375 base 10 in binary?
010000.01110

8. In MASM, with a "MOV CX, 12h" instruction, and a "LOOP" instruction, in decimal how many times will the program loop?
18

9. What is the binary value of decimal 12.875?
1100.1110

10. What is the numeric sequence of the key pad columns on the PPE board?
37, 2F, 1F

11. This section of memory represents a stack. What type of program is this?
BEEF:0FD0 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00
BEEF:0FE0 00 01 02 03 04 05 06 07-08 09 0A 0B 0C 0D 0E 0F
BEEF:0FF0 11 22 33 44 55 66 77 88-99 AA BB CC DD EE FF
EXE Program

12. Given the short code, what is the value in AX after the program is run?
0100

14. What command in DEBUG would be used to change the IP value?
RIP

15. What type of program is this?
AX=0000 BX=0000 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=1476 ES=1576 SS=1676 CS=1376 IP=0015 NV UP EI PL NZ NA PO NC
1376:0015 0100 ADD [BX+SI], AL DS:0000=CD
EXE

16. What flag(s) does the "LOOPNZ" instruction look at to determine whether to loop or not?
ZF

17. Which of the following is a valid x86 command for multiplying a number?
MUL BX?

18. How many bytes are in double precision IEEE floating point format numbers?
8

19. What is -130 decimal in 2's complement (8bits)?
01111110

20. If the SP is F00F, what will the SP value be after a “POP CX” instruction?
F011

21. What is the decimal value of C5 5A 57 00 in IEEE single precision FP format?
-3493.4375

22. On the PPE board, what number(s) on the key pad is(are) pressed for an output port value of 04h and an input port value of 2Fh?
8

23. You are trying to rebuild a HELLO project program in MASM and you get the following error: “LINK : fatal error L1089: HELLO.lrf : cannot open response file”. What would be the reason for such an error?
No source file is identified (no .asm file)

24. Which of the following will cause a program with a LOOP instruction to loop 48 times?
CX= 30h

25. If the SP is F00F, what is the SP value after a “PUSH CX” instruction?
F00D

26. What is(are) the advantage(s) of C language over assembly language?
C is transportable to other microprocessor architectures

27. The number of bits in single precision IEEE floating point format are:
32

28. Which of the following is not a valid command for a number into a register in MASM?
MOV AX, F8ADH

29. In the Hello MASM lab in the original code, what is the address of the byte used to start the string in the sequence “Hello World 0”?
0200

30. You are trying to rebuild a HELLO project program in MASM and you get the following error: “LINK : warning L4021: no stack segment”. What would be the reason for such an error?
No project template for COM was selected

31. How many nibbles are in double precision IEEE floating point format numbers?
16

32. A “pull down” resistor is used in digital circuits to do what?
To keep the signal line “tied” low until the line is active (goes high)

33. The acronym PWM used for motor control, is defined as which of the following?
Pulse Width Modulation

midterm2

1. This section of memory represents a stack. What type of program is this?
BEEF:FFD0 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00
BEEF:FFE0 00 01 02 03 04 05 06 07-08 09 0A 0B 0C 0D 0E 0F
BEEF:FFF0 11 22 33 44 55 66 77 88-99 AA BB CC DD EE FF
COM program

2. The number of bytes in extended precision IEEE floating point format are:
10

3. With a POP DX instruction, what will be the order of the accumulator, base, count, and data registers restored from the stack?
DX

4. What flags does the "LOOPNZ" instruction look at to determine whether to loop or not?
ZF

5. DAS used for BCD operations, stands for which of the following?
Decimal Adjust for Subtraction

6. Doubule precision IEEE FP standard uses _____ nibbles to represent data:
16

7. A "PUSH" instruction:
Decrements the SP

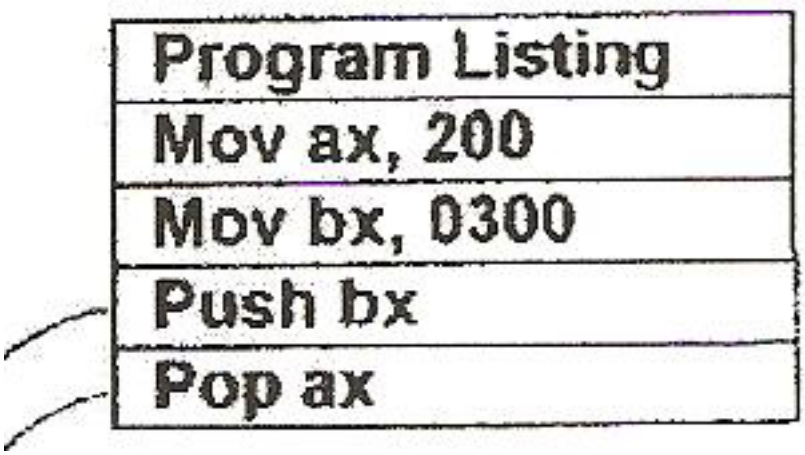
8. What type of program is this?
AX=0000 BX=0000 CX=0000 DX=0000 SP=00EE BP=0000 SI=0000 DI=0000
DS=1076 ES=1B76 SS=1476 CS=1376 IP=0050 NV UP EI PL NZ NA PO NC
1376:0050 0000 ADD [BX+SI],AL DS:0000=CD
EXE

9. -10.25 in decimal converted to binary would be:
-1010.0100

10. The "LOOP" instruction is equivalent to which of the following instructions?
DEC CX, JNZ

11. What is the numeric sequence to address the key pad rows on the PPE board used in the lab?
1, 2, 4, 8

12. Given the short code, what is the value in AX after the program is run?



0300

13. Which of the following is not a valid command for a number in MASM?
MOV AL, C4H

14. What is the binary value of decimal 12.875?
1100.1110

15. If the SP is F00F, what is the SP value after a "POP BX" instruction:
F011

16. In MASM, with a "MOV CX, 10h" instruction, and a "LOOP" instruction, how many times will the program loop?
16

17. How many byte(s) is/are required to represent a range of numbers from 0 to 255?
1

18. Determine the contents of register L after the following instructions have been executed:

Program Listing
MOV BL, 2EH
MOV CL, 0100b
ROL BL, CL

E2H

19. What are the contents of AL, AH, AX and EAX after the execution of the instruction, "MOV EAX, [30]"?

30	21	
31	43	
32	65	
33	87	

21, 43, 4321, 87654321

20. If CX is 0001, what will CX be after a "LOOPNZ" instruction:
0000

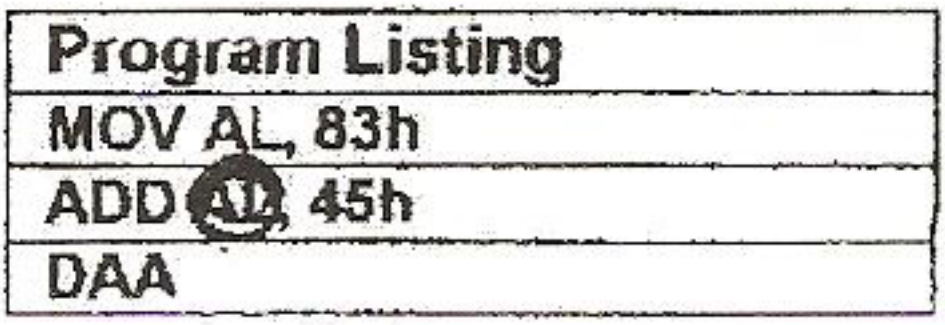
21. With a POPA instruction, what will be the order of the accumulator, base, count, and data registers restored from the stack?
BDCA

22. The ASCII codes in decimal for space, space, carriage return, line feed, end of string are:
32, 32, 13, 10, 36

23. You are trying to rebuild a HELLO project program in MASM and you get the following error: "LINK : fatal error L1089: HELLO.lrf : cannot open response file". What would be the reason for such an error?
No source file is identified (no .asm file)

24. On the PPE board, what number(s) on the key pad is(are) pressed for an output port value of 01h and an input port value of 1Fh?
3

25. For the instruction sequence below, determine the contents of the register AL after this program is executed:



28H

1. In string operations, register SI is used to point to the ource operand and register DI is used to point to the destination operand.
SI, DI

2. What type of program is this?
AX=0000 BX=0000 CX=0000 DX=0000 SP=00EE BP=0000 SI=0000 DI=0000
DS=1076 ES=1B76 SS=1476 CS=1376 IP=0115 NV UP EI PL NZ NA PO NC
1376:0115 0000 ADD [BX+SI], AL
EXE

3. A "POPA" instruction:
Increments the SP

4. What flag(s) does the "LOOPNE" instruction look at to determine whether to loop or not?
ZF

5. Double precision IEEE FP standard uses _____ nibbles to represent data.
16

6. The "LOOPNE" instruction is equivalent to which of the following instructions?
DEC, CX, JNE/JNZ

7. If the SP is F00F, what is the SP value after a "POP BX" instruction?
F011

8. The ASCII codes for space, space, carriage return, line feed, end of string in decimal are:
32, 32, 13, 10, 36

9. How many bit(s) is/are required to represent a range of numbers from 0 to 255?
8

10. In MASM, with a "MOV CX, 18h" instruction, and a "LOOP" instruction, in decimal how many times with the program loop?
24

11. The number of bytes in extended precision IEEE floating point format are:
10

12. If CX is 000, what will CX be after a "LOOP" instruction?
0001

13. ANDing 2FH and 10H will result in which of the following?
0

14. With a POPAX instruction, what will be the order of the accumulator, base, count, and data registers restored from the stack?
AX

15. What is the numeric sequence to address the key pad rows on the PPE board used in the lab?
1, 2, 4, 8

16. DAS used for BCD operations, stands for which of the following?
Decimal Adjust for Subtraction

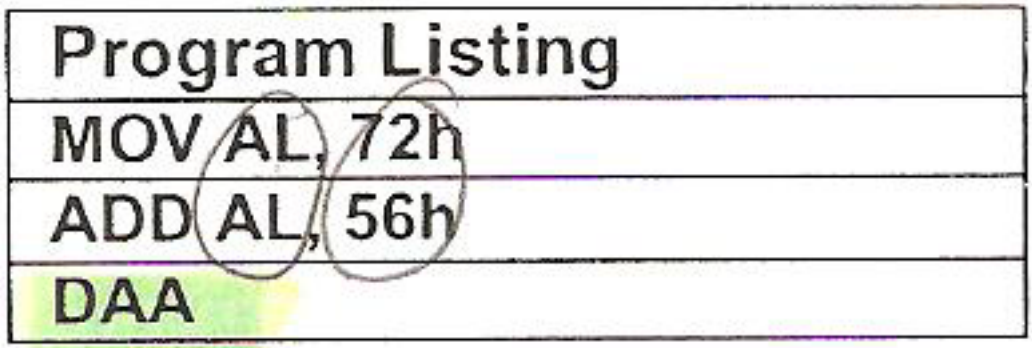
17. What are the contents of AL, AH, AX, and EAX after the execution of the instruction, "MOV EAX, 12345678H"?
78, 56, 5678, 12345678

18. -11.25 in decimal converted to binary would be:
-1011.0100

19. On the PPE board, what number(s) on the key pad is(are) pressed for an output port value of 04h and an input port value of 2Fh?
8

20. What command in DEBUG would be used to execute interrupts?
P

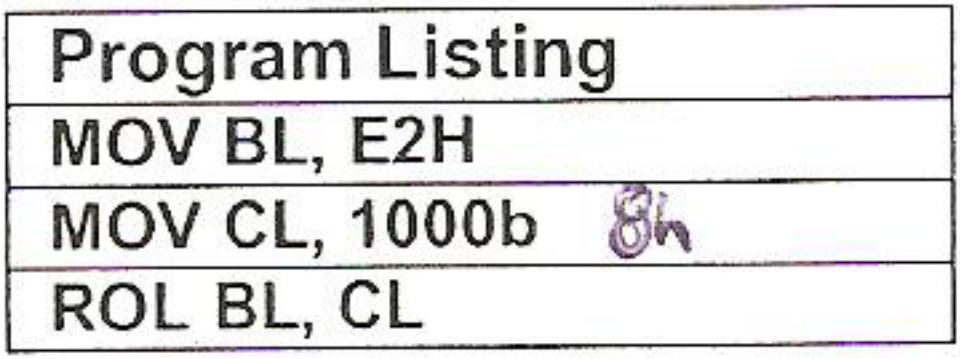
21. For the instruction sequence below, determine the contents of the register AL after this program is executed?



28H

22. What is 31.4375 base 10 in binary?
011111.0111

23. Determine the contents of register BL after the following instructions have been executed:



E2H

24. This section of memory represents a stack. What type of program is this?
BEEF:05D0 00 00 00 00 00 00 00 00-00 00 00 00 00 00 00 00
BEEF:05E0 00 01 02 03 04 05 06 07-08 09 0A 0B 0C 0D 0E 0F
BEEF:05F0 11 22 33 44 55 66 77 88-99 AA BB CC DD EE FF
EXE program

25. Using DEBUG, which command should be used to change the flag settings?
RF

26. You are trying to rebuild a HELLP project in MASM and you get the following error: "LINK :fatal error L1089: HELLO.lrf : cannot open response file".
No source file is identified (no .asm file)

1. Using DEBUG, which command should be used to change the flag settings?
RF

2. ANDing 20H and 1F will result in which of the following?
0

3. In MASM, with a "MOV CX, 12h" instruction, and a "LOOP" instruction, in decimal how many times will the program loop?
18

4. What is the numeric sequence to address the keypad rows on the PPE board used in the lab?
1, 2, 4, 8

5. What is 14.4375 base 10 in binary?
001110.01110

6. If the SP is F00F, what will the SP value be after a "POP CX" instruction?
F011

8. How many double words are in double precision IEEE floating point format numbers?
2

9. How many bit(s) is/are required to represent a range of numbers from 0 to 255?
8

10. A "NOP" instruction in a program will:
Perform a No Operation

11. You are trying to rebuild a HELLP project program in MASM and you get the following error: "LINK : warning L4021: no stack segment". What would be the reason for such an error?
No project template for COM was selected

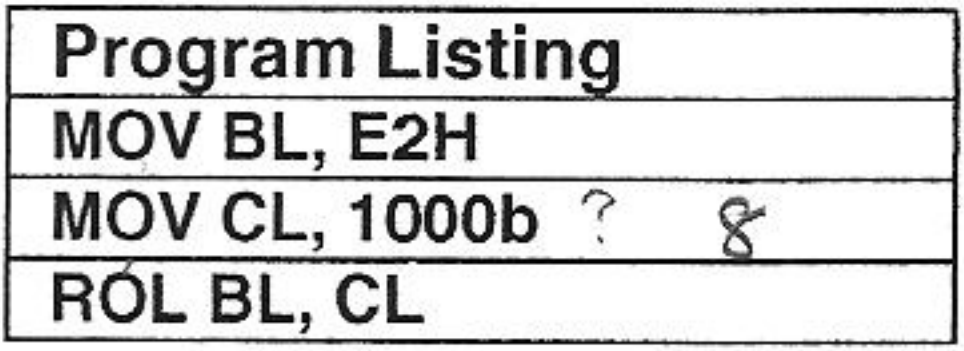
12. A "PUSH" instruction:
Decrements the SP

13. I CX is 0000, what will CX be after a "LOOP" instruction?
FFFF

14. On the PPE board, what number(s) on the key pad is(are) pressed for an output port value of 02h and an input port value for 2Fh?
5

15. With a POPAX instruction, what will be the order of the accumulator, base, count, and data registers restored from the stack?
AX

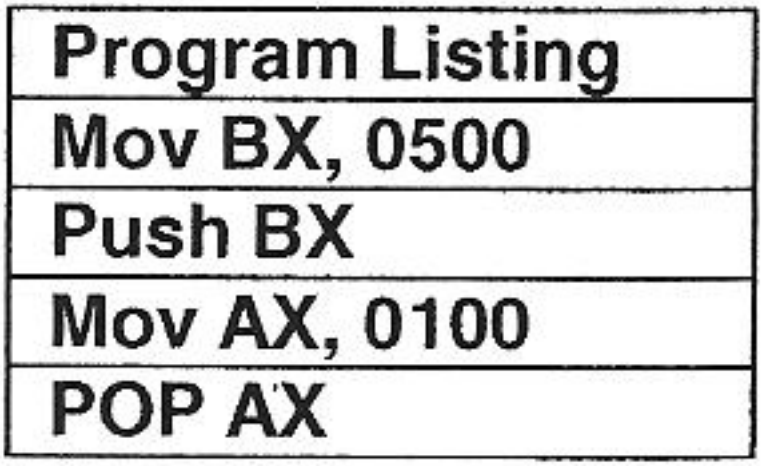
17. Determine the contents of registers BL after the following instructions ave beenexecuted:



E2H

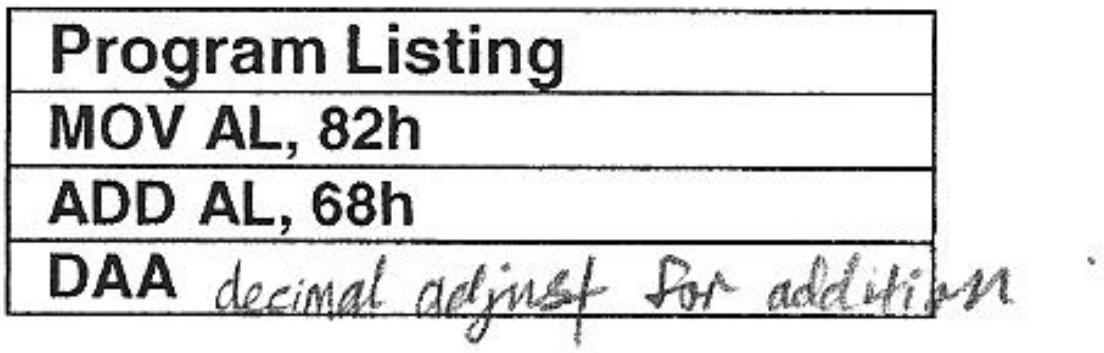
18. What is -1011.0101 base 2 in decimal?
-11.31

19. Given the short code, what is the value in AX after the program is run?



0500

20. For the instruction sequence below, determine the contents of the register AL after this program is executed:



50H

21. Which of the following is not a valid command for a number into a register in MASM?
MOV AX, AADH

22. The number of bits in single precision IEEE floating point format are:
80

23. What is the numeric sequence of the key pad columns on the PPE board used in the lab?
37, 2F, 1F

24. What command in DEBUG would be used to execute interrupts?
P

25. Which of the following is a valid x86 command for multiplying a number?
MUL, BX

1. Determine the contents of register BL after the following instructions have been executed:

E2H

2. What Hex values must be sent to address the key pad rows on the PPE board?
1, 2, 4, 8

3. With a POP BX instruction, what will be the order of the accumulator, base, count, and data registers restored from the stack?
BX

4. What is -1011.0101 base 2 in decimal?
-11.31

5. If CX is 0000, what will CX be after a "LOOP" instruction?
FFFF

6. How many bit(s) is/are required to represent a range of numbers from 0 to 256?
8

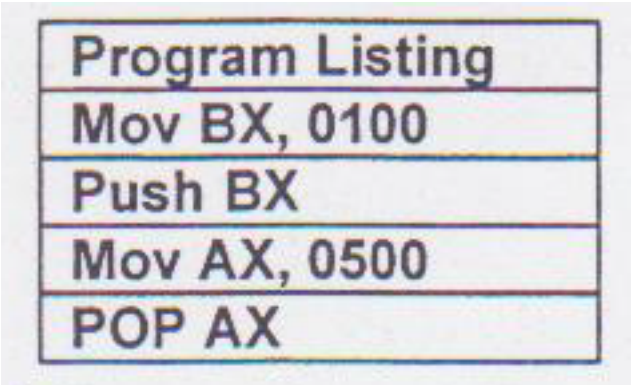
7. What is 16.4375 base 10 in binary?
010000.01110

8. In MASM, with a "MOV CX, 12h" instruction, and a "LOOP" instruction, in decimal how many times will the program loop?
18

9. What is the binary value of decimal 12.875?
1100.1110

10. What is the numeric sequence of the key pad columns on the PPE board?
37, 2F, 1F

12. Given the short code, what is the value in AX after the program is run?



0100

13. -32.75 base 10 in binary?
-100000.11000

14. What command in DEBUG would be used to change the IP value?
RIP

16. What flag(s) does the “LOOPNZ” instruction look at to determine whether to loop or not?
ZF

19. What is -130 decimal in 2’s compliment (8bits)?
01111110

20. If the SP is F00F, what will the SP value be after a “POP CX” instruction?
F00D

22. On the PPE board, what number(s) on the key pad is(Are) pressed for an output port value of 04h and an input port value of 2Fh?
8

24. Which of the following will cause a program with a LOOP instruction to loop 48 times?
CX=30h

25. If the SP is F00F, what is the SP value after a “PUSH CX” instruction?
F011

27. The number of bits in single precision IEEE floating point format are:
32

29. In the Hello MASM lab in the original code, what is the address of the byte used to start the string in the sequence “Hello World 0”?
0200

31. How many nibbles are in double precision IEEE floating point format numbers?
16