

Question No:1 (Marks: 1) - Please choose one
The first instruction of "COM" file must be at offset:

- ▶ 0x0010
- ▶ **0x0100 (Page 19)**
- ▶ 0x1000
- ▶ 0x0000

Question No:2 (Marks: 1) - Please choose one
The execution of the instruction "mov word [ES : 0], 0x0741" will print character "A" on screen
, background
color of the screen will be

- ▶ **Black (Page 81)**
- ▶ White
- ▶ Red
- ▶ Blue

Question No:3 (Marks: 1) - Please choose one
The iAPX888 architecture consists of _____ register.

- ▶ 12
- ▶ 14
- ▶ **16 (Page 15)**
- ▶ 18

Question No:4 (Marks: 1) - Please choose one
The execution of the instruction "mov word [ES: 0], 0x0741" will print "A" on the screen, color
of the
character will be

- ▶ Black
- ▶ **White (Page 81)**
- ▶ Red
- ▶ Blue

Question No:5 (Marks: 1) - Please choose one
One screen location corresponds to a

- ▶ Byte
- ▶ **Word (Page 80)**
- ▶ Double byte
- ▶ Double word

Question No:6 (Marks: 1) - Please choose one
When an item is pushed on the decrementing stack, the top of the stack is

- ▶ **First decremented and then element copied on to the stack (Page 68)**
- ▶ First incremented and then element copied on to the stack
- ▶ Decrement after the element copied on to the stack
- ▶ Incremented after the element copied on to the stack

Question No:7 (Marks: 1) - Please choose one
Each screen location corresponds to a word, the lower byte of this word contains ____

- ▶ **The character code (Page 81)**
- ▶ The attribute byte
- ▶ The parameters
- ▶ The dimensions

Question No:8 (Marks: 1) - Please choose one
if ax contains decimal -2 and BX contains decimal 2 then after the execution of
instructions: CMP AX, BX, JA label

- ▶ Jump will be taken
- ▶ Zero flag will set
- ▶ ZF will contain value -4
- ▶ **Jump will not be taken**

Question No:9 (Marks: 1) - Please choose one
If D is "35" is shift to left 2 bits the new value

- ▶ 35
- ▶ 70
- ▶ **140**
- ▶ 17

Question No:10 (Marks: 1) - Please choose one
When two 16bit numbers are added the answer can be 17 bits long, this extra bit that won't fit
in the target
register is placed in the where it can be used and tested

- ▶ **carry flag (Page 16)**
- ▶ Parity Flag
- ▶ Auxiliary Carry

► Zero Flag

Question No: 11 (Marks: 1) - Please choose one

Only instructions allow moving data from memory to memory.

► **string** (Page 29)

► word

► indirect

► stack

Question No:12 (Marks: 1) - Please choose one

When a 16 bit number is divided by an 8 bit number, the quotient will be in

► **AL** (Page 85)

► AX

► AH

► DX

Question No:13 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the red component of background color ?

► 3

► 4

► 5

► **6** (Page 81)

Question No:14 (Marks: 1) - Please choose one

| 0 | --> | 1 | 1 | 0 | 1 | 0 | 0 | 0 | --> | C | is a example of _____

► Shl

► sar

► **Shr** (Page 52)

► Sal

Question No:15 (Marks: 1) - Please choose one

allow changing specific processor behaviors and are used to play with it.

► **Special Instructions** (Page 14)

► Data Movement Instructions

► Program Control Instructions

► Arithmetic and Logic Instructions

Question No:16 (Marks: 1) - Please choose one

8088 is a 16bit processor with its accumulator and all registers of _____.

► 32 bits

► 6 bits

► **16 bits** (Page 14)

► 64 bits

Question No:17 (Marks: 1) - Please choose one

decrements SP (the stack pointer) by two and then transfers a word from the source operand to the top of stack

► **PUSH** (Page 71)

► POP

► CALL

► RET

1. In instruction ADC the operands can be

► Two register only

► Two register and one memory location

► **CF and two other operands** (Page 57)

► ZF and two other operands

2. After the execution of instruction "RET"

► **SP is incremented by 2** (Page 66)

► SP is decremented by 2

► SP is incremented by 1

► SP is decremented by 1

3. The extended ASCII has

► 64 characters

► **128 characters** (Page 79)

► 256 characters

► 502 characters

4. The second byte in the word designated for screen location holds

► The dimension of the screen

► Character position on the screen

► **Character color on the screen** (Page 81)

► ACSII code of the character

5. REP will always

► Incremented CX by 1

► Incremented CX by 2

► **Decrement CX by 1** (Page 92)

► Decrement CX by 2

6. The routine that executes in response to an INT instruction is called

► **ISR** (Page 103)

► IRS

► ISP

► IRT

7. The iAPX88 architecture consists of _____ register.

► 12

► 14

► **16** (Page 15) Rep

► 18

8. In the instruction "CMP AX,BX" the contents of

► AX are changed

► BX are changed

► CX are changed

► **Flag register are changed** (Page 39)

9. All the addressing mechanisms in iAPX88 return a number called _____ address.

► **Effective** (Page 33)

► faulty

► indirect

► direct

10. The execution of the instruction "mov word [ES: DI], 0x0720"

► **will clear next character on screen** (Page 82)

► will print "20" at top left of the screen

► will print "20" at top right of the screen

► will move DI at location 0720 on the screen

11. "mov byte [num1],5" is _____ instruction.

► legal

► **illegal** (Page 30)

► stack based

► memory indirect

12. MOV instruction transfers a byte or word from which of the following source location.

► DS:DI

► ES:SI

► **ES:DI** (Page 92)

► DS:SI

13. The execution of the instruction "mov word [ES: 0], 0x0741" will print "A" on the screen, color of the character will be

► Black

► **White** (Page 81) rep

► Red

► Blue

14. If AX contains FFFFh, then after execution of instruction "SAL ax, 3", the result will be

► -3

► +3

► -8

► +8

15. If the decimal number "35" is shifted by two bit to left, the new value will be

► 35

► 70

► **140** (00100011 = 35 , 10001100=140)

► 17

16. While using STOSB, if DF=1 then

► The value of SI will be incremented by one

► The value of SI will be incremented by two

► **The value of SI will be decremented by one**

► The value of SI will be decremented by two

17. After the execution of STOSW, the CX will be

► Decrement by 1

► **Decrement by 2** (Page 92)

► Increment by 1

► Increment by 2

18. The memory address always move from

► **processor to memory**

► memory to processor

► memory to peripheral

► peripheral to processor

[click here for detail](#)

19. An offset alone is not complete without

► **Segment** (Page 34)

- code label
- index register
- data label

20. Code Segment is associated to _____ register by default.

► **IP** (Page 34)

- SS
- BP
- CX

After the execution of SAR instruction:

- MSB remain as it is
- MSB Will change
- **MSB move to left** (Page 52)
- No change will occur.

ASCII stands for _____. The screen is two dimensional space having:

► **25 Rows and 25 Columns** (Page 80)

- 25 Rows and 80 Columns
- 80 Rows and 80 Columns
- 80 Rows and 25 Columns

Question No:3 (Marks: 1) - Please choose one

In the Rotate Right Operation every bit moves one position to right and the bit dropped from the right is

inserted at the left and:

► **Dropped in CF** (Page 53)

- moves to AL
- Don't go anywhere.

_____ of the following flags will be affected by MOVSB?

► **DF** [Click here for Detail](#)

- ZF
- PF
- No effect on flags.

The iAPX88 processor supports _____ modes of memory access.

- 5
- 6
- **7** (Page 35)
- 8

Stack is a _____ that behaves in a first in last out manner.

► Program

► **data structure** (Page 67)

- Heap
- None of the Given

The physical address of the stack is obtained by

► SS:SI combination

► **SS:SP combination** (Page 68)

- ES:BP combination
- ES:SP combination

Foreground and background parameter will be

- 32bits
- 16bits
- **8bits**
- 4bits

Question No:4 (Marks: 1) - Please choose one

The clear screen operation initialize whole block of memory

- 0741
- 0417
- 0714
- **0174, 0720** (Page 91)

In STOSB instruction, when DF is Set, SI is

- Incremented by 1
- Incremented by 2
- **Decrement by 1** [Click here for Detail](#)
- Decrement by 2

Assembly language is:

- **Low-level programming language** [Click here for detail](#)
- High-level programming language
- Also known as machine language
- Not considered closer to the computer

A 32 Bit processor has accumulator of -----

- ▶ 8 bit
- ▶ 16 bit
- ▶ **32 bit** (Page 12)
- ▶ 64 bit

Question No:8 (Marks: 1) - Please choose one
To transfer control back the RET instruction take

- ▶ 1 argument
- ▶ 1 argument
- ▶ **3 arguments** (Page 72)
- ▶ No arguments

Question No:9 (Marks: 1) - Please choose one
RET is executed, it recovers the values from

- ▶ Register
- ▶ **Stack** (Page 71)
- ▶ Data segment
- ▶ Code segment

Question No:10 (Marks: 1) - Please choose one
To convert any digit to its ASCII representation

- ▶ **Add 0x30 in the digit** (Page 80)
- ▶ Subtract 0x30 from the digit
- ▶ Add 0x61 in the digit
- ▶ Subtract 0x61 from the digit

Question No:11 (Marks: 1) - Please choose one
The prevalent convention in most high level languages is stack clearing by the

- ▶ Caller
- ▶ **Callee** (Page 74)
- ▶ RET
- ▶ Stack

Question No:12 (Marks: 1) - Please choose one
After execution of JCXZ instruction CX will changed with flag affect.

- ▶ CF
- ▶ OF
- ▶ DF
- ▶ **None of Above** (Page 43)

Question No:13 (Marks: 1) - Please choose one
Execution of the instruction "mov word [ES : 0], 0x0741" will print

- ▶ **"A" appear on the top left of screen** (Page 81)
- ▶ "A" appear on the top right of screen
- ▶ "A" appear on the center of screen
- ▶ "A" appear on the bottom left of screen

Question No:14 (Marks: 1) - Please choose one
if contains decimal -2 and BX contains decimal 2 then after the execution of instructions:

CMP AX, BX

JA label

- ▶ Jump will be taken
- ▶ Zero flag will set
- ▶ ZF will contain value -4
- ▶ **Jump will not be taken**

Question No:15 (Marks: 1) - Please choose one
Which of the following options contain the set of instructions to open a window to the video memory?

- ▶ mov AX, 0xb008
mov ES, AX
- ▶ **mov AX, 0xb800**
mov ES, AX (Page 81) rep
- ▶ mov AX, 0x8b00
mov ES, AX
- ▶ mov AX, 0x800b
mov ES, AX

Question No:16 (Marks: 1) - Please choose one
If D is "35" is shift to left 2 bits the new value

- ▶ 35
- ▶ 70
- ▶ **140**
- ▶ 17

Question No:17 (Marks: 1) - Please choose one
Execution of the instruction "mov word [ES : 0], 0x1230" will print the character color will

► **Green**

► White

► Red

► Black

Question No: 1 (Marks: 1) - Please choose one

After the execution of SAR instruction

► The msb is replaced by a 0

► The msb is replaced by 1

► The msb retains its original value

► **The msb is replaced by the value of CF (Page 52)**

Question No: 2 (Marks: 1) - Please choose one

RETF will pop the offset in the

► BP

► **IP (Page 69)**

► SP

► SI

Question No: 3 (Marks: 1) - Please choose one

The routine that executes in response to an INT instruction is called

► **ISR (Page 103) rep**

► IRS

► ISP

► IRT

Question No: 4 (Marks: 1) - Please choose one

The first instruction of "COM" file must be at offset:

► 0x0010

► **0x0100 (Page 19) rep**

► 0x1000

► 0x0000

Question No: 5 (Marks: 1) - Please choose one

"Far" jump is not position relative but is _____

► memory dependent

► **Absolute (Page 46)**

► Temporary

► indirect

Question No: 6 (Marks: 1) - Please choose one

Only _____ instructions allow moving data from memory to memory.

► **string (Page 29) rep**

► word

► indirect

► stack

Question No: 7 (Marks: 1) - Please choose one

After the execution of instruction "RET 2"

► SP is incremented by 2

► **SP is decremented by 2 (Page 66) rep**

► SP is incremented by 4

► SP is decremented by 4

Question No: 8 (Marks: 1) - Please choose one

DIV instruction has

► **Two forms (Page 85)**

► Three forms

► Four forms

► Five forms

Question No: 9 (Marks: 1) - Please choose one

When the operand of DIV instruction is of 16 bits then implied dividend will be of

► **8 bits (Page 85)**

► 16 bits

► 32 bits

► 64 bits

Question No: 10 (Marks: 1) - Please choose one

After the execution of MOVS instruction which of the following registers are updated

► SI only

► DI only

► **SI and DI only (Page 92)**

► SI, DI and BP only

Question No: 11 (Marks: 1) - Please choose one

In 8088 architecture, whenever an element is pushed on the stack

► SP is decremented by 1

► **SP is decremented by 2** (Page 68)

► SP is decremented by 3

► SP is decremented by 4

Question No: 12 (Marks: 1) - Please choose one

When a very large number is divided by very small number so that the quotient is larger than the space provided, this is called

► Divide logical error

► **Divide overflow error** (Page 85)

► Divide syntax error

► An illegal instruction

Question No: 13 (Marks: 1) - Please choose one

In the word designated for one screen location, the higher address contains

► The character code

► **The attribute byte** (Page 81)

► The parameters

► The dimensions

Question No: 14 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

► mov AX, 0xb008

mov ES, AX

► **mov AX, 0xb800**

mov ES, AX (Page 81) rep

► mov AX, 0x8b00

mov ES, AX

► mov AX, 0x800b

mov ES, AX

Question No: 15 (Marks: 1) - Please choose one

In a video memory, each screen location corresponds to

► One byte

► **Two bytes** (Page 80)

► Four bytes

► Eight bytes

Question No: 16 (Marks: 1) - Please choose one

The execution of the instruction "mov word [ES : 0], 0x0741" will print character "A" on screen , background color of the screen will be

► **Black** (Page 81) rep

► White

► Red

Question No: 1 (Marks: 1) - Please choose one

One screen location corresponds to a

► Byte

► **Word** (Page 80) rep

► Double byte

► Double word

Question No: 2 (Marks: 1) - Please choose one

After the execution of "PUSH AX" statement

► AX register will reside on the stack

► **A copy of AX will go on the stack** (Page 69)

► The value of AX disappear after moving on stack

► Stack will send an acceptance message

Question No: 3 (Marks: 1) - Please choose one

physical address of the stack is obtained by

► SS:SP combination

► SS:SI combination

► **SS:SP combination** (Page 68) rep

► ES:BP combination

► ES:SP combination

Question No: 4 (Marks: 1) - Please choose one

If the address of memory location Num1 is 0117 and its content is 0005 then after execution of the instruction

" mov bx, Num1" bx will contain

► 0005

► **0117** (Page 30)

► Num1

► 1701

Question No: 5 (Marks: 1) - Please choose one

In STOS instruction, the implied source will always be in

► **AL or AX registers** (Page 92)

► DL or DX registers

► BL or BX registers

► CL or CX registers

Question No:6 (Marks: 1) - Please choose one

The shift logical right operation inserts

A zero at right

A **zero at left** (Page 52)

A one at right

A one at right

Question No:7 (Marks: 1) - Please choose one

REP will always

Increment CX by 1

Increment CX by 2

Decrement CX by 1 (Page 92) rep

Decrement CX by 2

Question No:8 (Marks: 1) - Please choose one

When an item is pushed on the decrementing stack, the top of the stack is

► **First decremented and then element copied on to the stack** (Page 68) rep

► First incremented and then element copied on to the stack

► Decrement after the element copied on to the stack

► Incremented after the element copied on to the stack

Question No:9 (Marks: 1) - Please choose one

assembly the CX register is used normally as a _____ register.

► source

► **counter** (Page 32)

► index

► pointer

Which is the unidirectional bus ?

(I) Control Bus

(II) Data Bus

(III) Address Bus

► I only

► II only

► **III only** (Page 9)

► I and II only

Question No:10 (Marks: 1) - Please choose one

The basic function of SCAS instruction is to

► **Compare** (Page 92)

► Scan

► Sort

► Move data

Question No:11 (Marks: 1) - Please choose one

_____ register holds the address of next instruction is to be executed

► Base pointer

► Code segment

► Source index

► **Program counter** (Page 13)

Question No:12 (Marks: 1) - Please choose one

JC and JNC test the _____ flag.

► **carry** (Page 41)

► parity

► zero

► sign

Question No:13 (Marks: 1) - Please choose one

After the execution of REP instruction CX will be decremented then which of the following flags will be affected?

► CF

► OF

► DF

► **No flags will be affected** (Page 93)

Question No:14 (Marks: 1) - Please choose one

In string manipulation whenever an instruction needs a memory source, which of the following will hold the pointer to it?

► ES: DI

► ES: BP

►DS:BP

►**DS:SI** (Page 91)

Question No:15 (Marks: 1) - Please choose one
which bit sets the character "blinking" on the screen?

►5

►6

►**7** (Page 7)

►8

Question No:16 (Marks: 1) - Please choose one

If we want to divide a signed number by 2, this operation can better be accomplished by

►SHR

►**SAR** (Page 52)

►SHL

►SAL

Question No:17 (Marks: 1) - Please choose one

After the execution of STOSB,the CX will be.....

►Incremented by 1

►Incremented by 2

►**Decrementd by 1** (Page 92)

►Decrementd by 2

Question No:18 (Marks: 1) - Please choose one

Each screen location corresponds to a word, the lower byte of this word contains ____

►**The character code** (Page 81) rep

►The attribute byte

►The parameters

►The dimensions

Question No:19 (Marks: 1) - Please choose one

In a video memory, each screen location corresponds to

►One byte

►**Two bytes** (Page 86)

►Four bytes

►Eight bytes

Question No:1 (Marks: 1) - Please choose one

Execution of the instruction "mov word [ES : 0], 0x0741" will print

►**"A" appear on the top left of screen** (Page 81) rep

►"A" appear on the top right of screen

►"A" appear on the center of screen

►"A" appear on the bottom left of screen

Question No:2 (Marks: 1) - Please choose one

After the execution of "PUSH AX" statement

►**AX register will reside on the stack** (Page 69) rep

►A copy of AX will go on the stack

►The value of AX disappear after moving on stack

►Stack will send an acceptance message

Question No:3 (Marks: 1) - Please choose one

If D is "35" is shift to left 2 bits the new value

►35

►70

►**140**

►17

Question No:4 (Marks: 1) - Please choose one

When an item is pushed on the decrementing stack, the top of the stack is

►**First decremented and then element copied on to** (Page 68) rep

►First incremented and then element copied on to the stack

►Decrementd after the element copied on to the stack

►Incrementd after the element copied on to the stack

Question No:5 (Marks: 1) - Please choose one

After the execution of REP instruction CX will be decremented then which of the following flags will be affected?

►CF

►OF

►DF

►**No flags will be affected** (Page 93) rep

Question No:6 (Marks: 1) - Please choose one

In a video memory, each screen location corresponds to

►One byte

►**Two bytes** (Page 66)

►Four bytes

► Eight bytes

Question No:7 (Marks: 1) - Please choose one
shifting the -15 two bit sAR

► -7

► -8

► 7

► 8

Question No:8 (Marks: 1) - Please choose one
mov ax,5 has

► 1 operand

► **2 operand** (Page 25)

► 3 operand

► 4 operand

The physical address of the stack is obtained by

► SS:SP combination

► SS:SI combination

► **SS:SP combination** (Page 68) rep

► ES:BP combination

► ES:SP combination

Question No: 2 (Marks: 1) - Please choose one

After the execution of instruction "RET "

► SP is incremented by 2

► **SP is incremented by 2** (Page 66) rep

► SP is decremented by 2

► SP is incremented by 1

► SP is decremented by 1

Question No: 3 (Marks: 1) - Please choose one

The second byte in the word designated for one screen location holds

► Character color on the screen

► The dimensions of the screen

► Character position on the screen

► **Character color on the screen** (Page 81) rep

► ASCII code of the character

Question No: 4 (Marks: 1) - Please choose one

REP will always

► Increment CX by 1

► Increment CX by 2

► **Decrement CX by 1** (Page 92)

► Decrement CX by 2

Question No: 5 (Marks: 1) - Please choose one

The basic function of SCAS instruction is to

► **Compare** (Page 92) rep

► Scan

► Sort

► Move data

Question No: 6 (Marks: 1) - Please choose one

Index registers are used to store _____

► Data

► Intermediate result

► **Address** (Page 16)

► Both data and addresses

Question No: 7 (Marks: 1) - Please choose one

The bits of the _____ work independently and individually

► index register

► base register

► **flags register** (Page 12)

► accumulator

Question No: 8 (Marks: 1) - Please choose one

To convert any digit to its ASCII representation

► **Add 0x30 in the digit** (Page 80) rep

► Subtract 0x30 from the digit

► Add 0x61 in the digit

► Subtract 0x61 from the digit

Question No: 12 (Marks: 1) - Please choose one

If AX contains decimal -2 and BX contains decimal 2 then after the execution of instructions:

CMP AX, BX

JA label

► Jump will be taken

- ▶ Zero flag will set
- ▶ ZF will contain value -4
- ▶ **Jump will not be taken**

Question No: 13 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES : 160], 0x1230” will print a character “0” on the screen at

- ▶ Second column of first row
- ▶ **First column of second row**
- ▶ Second column of second row
- ▶ First column of third row

(Page 81)

Question No: 14 (Marks: 1) - Please choose one

If the direction of the processing of a string is from higher addresses towards lower addresses then

- ▶ ZF is cleared
- ▶ **DF is cleared**
- ▶ ZF is set
- ▶ DF is set

(Page 91)

Question No: 15 (Marks: 1) - Please choose one

The instruction ADC has _____ Operand(s)

- ▶ 0
- ▶ 1
- ▶ **2**
- ▶ 3

(Page 56)

Question No: 16 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the red component of background color ?

- ▶ 3
- ▶ 4
- ▶ 5
- ▶ **6**

(Page 81)

Question No: 1 (Marks: 1) - Please choose one

Suppose AL contains 5 decimal then after two left shifts produces the value as

- ▶ 5
- ▶ **10**
- ▶ 15
- ▶ 20

Question No: 2 (Marks: 1) - Please choose one

In STOS instruction, the implied source will always be in

- ▶ **AL or AX registers**
- ▶ DL or DX registers
- ▶ BL or BX registers
- ▶ CL or CX registers

(Page 92) rep

Question No: 3 (Marks: 1) - Please choose one

After the execution of STOSW the CX will be

- ▶ Decremented by 1
- ▶ **Decremented by 2**
- ▶ Incremented by 1
- ▶ Incremented by 2

(Page 92) rep

Question No: 4 (Marks: 1) - Please choose one

The basic function of SCAS instruction is to

- ▶ **Compare**
- ▶ Scan
- ▶ Sort
- ▶ Move data

(Page 92) rep

Question No: 5 (Marks: 1) - Please choose one

Which is the unidirectional bus ?

- (I) Control Bus
- (II) Data Bus
- (III) Address Bus

- ▶ I only
- ▶ II only
- ▶ **III only**
- ▶ I and II only

(Page 9) rep

Question No: 6 (Marks: 1) - Please choose one

The operation of CMP is t▶

- ▶ **Subtract Source from Destination**
- ▶ Subtract Destination to from Source
- ▶ Add 1 to the Destination
- ▶ Add Source and Destination

(Page 39)

Question No: 7 (Marks: 1) - Please choose one
The registers IP, SP, BP, SI, DI, and BX all can contain a _____ offset.

► 8-bit

► **16-bit** (Page 21)

► 32-bit

► 64-bit

Question No: 8 (Marks: 1) - Please choose one

In assembly the CX register is used normally as a _____ register.

► source

► **counter** (Page 92)

► index

► pointer

Question No: 9 (Marks: 1) - Please choose one

All the addressing mechanisms in iAPX86 return a number called _____ address.

► **effective** (Page 33)

► faulty

► indirect

► direct

Question No: 10 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the blue component of foreground color

► 3

► 2

► 1

► **0** (Page 81)

Question No: 11 (Marks: 1) - Please choose one

When a 32 bit number is divided by a 16 bit number, the quotient will be stored in

► **AX** (Page 85)

► BX

► CX

► DX

Question No: 12 (Marks: 1) - Please choose one

"mov byte [num1], 5" is _____ instruction.

► **legal** (Page 30) rep

► illegal

► stack based

► memory indirect

Question No: 13 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

► mov AX, 0xb008

mov ES, AX

► **mov AX, 0xb800**

mov ES, AX (Page 81) rep

► mov AX, 0x8b00

mov ES, AX

► mov AX, 0x800b

mov ES, AX

Question No: 14 (Marks: 1) - Please choose one

The execution of the instruction "mov word [ES : 0], 0x0741" will print character "A" on screen, color of the character will be

► Black

► **White** (Page 81) rep

► Red

► Blue

Question No: 15 (Marks: 1) - Please choose one

Which of the following flags will be affected by MOVSW?

► DF

► PF

► ZF

► **No effect on flags**

Question No: 16 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the blue component of background color ?

► 3

► **4** (Page 81)

► 5

► 6

Question No: 1 (Marks: 1) - Please choose one

To transfer control back the RET instruction take

- ▶ 1 argument
- ▶ 1 argument
- ▶ **3 arguments**
- ▶ No arguments

(Page 72) rep

Question No: 2 (Marks: 1) - Please choose one
In STOSB instruction SI is decremented or incremented by

- ▶ 4
- ▶ **1** (Page 92)
- ▶ 2
- ▶ 3

Question No: 3 (Marks: 1) - Please choose one
CMPS instruction subtracts the source location to the destination location.
Destination location always lies in

- ▶ **DS:SI** (Page 93)
- ▶ DS:DI
- ▶ ES:SI
- ▶ ES:DI

Question No: 4 (Marks: 1) - Please choose one
Regarding assembler, which statement is true:

- ▶ **Assembler converts mnemonics to the corresponding OPCODE** (Page 13)
- ▶ Assembler converts OPCODE to the corresponding mnemonics
- ▶ Assembler executes the assembly code all at once
- ▶ Assembler executes the assembly code step by step

Question No: 5 (Marks: 1) - Please choose one
If "BB" is the OPCODE of the instruction which states to "move a constant value to AX register", the hexadecimal representation (Using little Endian notation) of the instruction "Mov AX,336" ("150" in hexadecimal number system) will be:

- ▶ 0xBB0150
- ▶ 0x5001BB
- ▶ 0x01BB50
- ▶ **0xBB5001** (Page 19)

Question No: 6 (Marks: 1) - Please choose one
In the instruction MOV AX, 5 the number of operands are

- ▶ 1
- ▶ **2** (Page 25) rep
- ▶ 3
- ▶ 4

Question No: 7 (Marks: 1) - Please choose one
The maximum parameters a subroutine can receive (with the help of registers) are

- ▶ 6
- ▶ **7** (Page 72)
- ▶ 8
- ▶ 9

Question No: 8 (Marks: 1) - Please choose one
In assembly the CX register is used normally as a _____ register.

- ▶ source
- ▶ **counter** (Page 92) rep
- ▶ index
- ▶ pointer

Question No: 9 (Marks: 1) - Please choose one
All the addressing mechanisms in iAPX88 return a number called _____ address.

- ▶ **effective** (Page 33) rep
- ▶ faulty
- ▶ indirect
- ▶ direct

Question No: 10 (Marks: 1) - Please choose one
When a 16 bit number is divided by an 8 bit number, the dividend will be in

- ▶ **AX** (Page 85)
- ▶ BX
- ▶ CX
- ▶ DX

Question No: 11 (Marks: 1) - Please choose one
in Left-Shift-Operation the left most bit _____

- ▶ will drop
- ▶ **will go into CF** (Page 52)
- ▶ Will come to the right most
- ▶ will be always 1

Question No: 12 (Marks: 1) - Please choose one

Suppose the decimal number "35" after shifting its binary two bits to left, the new value becomes _____

- ▶ 35
- ▶ 70
- ▶ **140**
- ▶ 17

Question No: 13 (Marks: 1) - Please choose one

When divide overflow occurs processor will be interrupted this type of interrupt is called

- ▶ **Hardware interrupt**
- ▶ Software interrupt
- ▶ Processor exception
- ▶ Logical interrupts

Question No: 14 (Marks: 1) - Please choose one

Which mathematical operation is dominant during the execution of SCAS instruction

- ▶ Division
- ▶ Multiplication
- ▶ Addition
- ▶ Subtraction

(Page 92) rep

Question No: 15 (Marks: 1) - Please choose one

After the execution of REP instruction CX will be decremented then which of the following flags will be affected?

- ▶ CF
- ▶ OF
- ▶ DF
- ▶ No flags will be affected

(Page 93) rep

Question No: 16 (Marks: 1) - Please choose one

_____ is one of the reasons due to which string instructions are used in 8088

- ▶ Efficiency and accuracy
- ▶ Reduction in code size and accuracy
- ▶ Reduction in code size and speed
- ▶ Reduction in code size and efficiency

(Page 91)

**CS401- Computer Architecture and Assembly
Language Programming
McQs collection Share by Shining star**

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Question No: 1 (Marks: 1)

To transfer control back the RET instruction take

- □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ 1 argument
- □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ 1 argument
- □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ 3 arguments
- □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ No arguments

Question No: 2 (Marks: 1)

In STOSB instruction SI is decremented or incremented by

4

1

2

3

Question No: 3 (Marks: 1)

CMPS instruction subtracts the source location to the destination location.

Destination location always lies in

DS:SI

DS:DI

ES:SI

ES:DI

Question No: 4 (Marks: 1)

Regarding assembler, which statement is true:

Assembler converts mnemonics to the corresponding OP CODE

Assembler converts OP CODE to the corresponding mnemonics.

Assembler executes the assembly code all at once

Assembler executes the assembly code step by step

Question No: 5 (Marks: 1)

If "BB" is the OP CODE of the instruction which states to "move a constant value to AX register", the hexadecimal representation (Using little Endian notation) of the instruction "Mov AX,336" ("150" in hexadecimal number system) will be:

0xBB0150

0x5001BB

0x01BB50

0xBB5001

Question No: 6 (Marks: 1)

In the instruction MOV AX, 5 the number of operands are

1

2

3

4

Question No: 7 (Marks: 1)

The maximum parameters a subroutine can receive (with the help of registers) are

6

7

8

9

Question No: 8 (Marks: 1)

In assembly the CX register is used normally as a _____ register.

source

counter

index

pointer

Question No: 9 (Marks: 1)

All the addressing mechanisms in iAPX 8 8 return a number called _____ address .

effective

faulty

indirect

direct

Question No: 10 (Marks: 1)

When a 16 bit number is divided by an 8 bit number, the dividend will be in

AX

BX

CX

DX

Question No: 11 (Marks: 1)

in Left-Shift-Operation the left most bit _____

will drop

will go into CF

Will come to the right most

will be always 1

Question No: 12 (Marks: 1)

Suppose the decimal number "35" after shifting its binary two bits to left, the new value becomes _____

35
70

140

17

Question No: 13 (Marks: 1)

When divide overflow occurs processor will be interrupted this type of interrupt is called
Hardware interrupt

Software interrupt

Processor exception

Logical interrupts

Question No: 14 (Marks: 1)

Which mathematical operation is dominant during the execution of SCAS instruction

Division

Multiplication

Addition

Subtraction

Question No: 15 (Marks: 1)

After the execution of REP instruction CX will be decremented then which of the
following flags will be affected?

CF

OF

DF

No flags will be affected

Question No: 16 (Marks: 1)

_____ is one of the reasons due to which string instructions are used in 8088

Efficiency and accuracy

Reduction in code size and accuracy

Reduction in code size and speed

Reduction in code size and efficiency

Question No: 17 (Marks: 1)

Write any two control instructions.

Question No: 18 (Marks: 1)

RET instruction take how many arguments

Question No: 19 (Marks: 2)

Explain the fuction of rotate right (ROR) instruction

Question No: 20 (Marks: 2)

Describe the PUSH function

Question No: 21 (Marks: 3)

Write down the names of four segment registers?

Question No: 22 (Marks: 3)

For what purpose "INT 4" is reserved?

Question No: 23 (Marks: 5)

Given that [BX+0x0100] BX=0x0100

Ds=0xFFFF0

Calculate the physical address

Question No: 1 (Marks: 1)

The physical address of the stack is obtained by

- ▶ **SS:SP combination**
 - ▶ SS:SI combination

- ▶ **SS:SP combination**

- ▶ ES:BP combination

- ▶ ES:SP combination

Question No: 2 (Marks: 1)

After the execution of instruction "RET "

- ▶ **SP is incremented by 2**
- ▶ **SP is incremented by 2**

- ▶ SP is decremented by 2

- ▶ SP is incremented by 1

- ▶ SP is decremented by 1

Question No: 3 (Marks: 1)

The second byte in the word designated for one screen location holds

- ▶ **Character color on the screen**

- ▶ The dimensions of the screen
- ▶ Character position on the screen
- ▶ **Character color on the screen**
- ▶ ASCII code of the character

Question No: 4 (Marks: 1)

REP will always

- ▶ **Decrement CX by 1**
- ▶ Increment CX by 1

▶ Increment CX by 2

▶ **Decrement CX by 1**

▶ Decrement CX by 2

Question No: 5 (Marks: 1)

The basic function of SCAS instruction is to

- ▶ **Compare**
- ▶ **Compare**

▶ Scan

► Sort

► Move data

Question No: 6 (Marks: 1)

Index registers are used to store _____

Address: ► =====

Data ►

Intermediate result ►

Address: ► =====

Both data and addresses ►

Question No: 7 (Marks: 1)

The bits of the _____ work independently and individually

flags: ► ===== **register**

index register ►

base register ►

flags register: ► =====

accumulator ►

Question No: 8 (Marks: 1)

To convert any digit to its ASCII representation

► Add 0x30 in the digit

► Add 0x30 in the digit

► Subtract 0x30 from the digit

► Add 0x61 in the digit

► Subtract 0x61 from the digit

Question No: 9 (Marks: 1)

When a 32 bit number is divided by a 16 bit number, the quotient is of

- ▶ 4 bits
- ▶ 32 bits
- ▶ 16 bits
- ▶ 8 bits
- ▶ 4 bits

Question No: 10 (Marks: 1)

When a 16 bit number is divided by an 8 bit number, the quotient will be in

- ▶ AL
- ▶ AX
- ▶ AL
- ▶ AH
- ▶ DX

Question No: 11 (Marks: 1)

Which mathematical operation is dominant during the execution of SCAS instruction

- ▶ Division
- ▶ Division

▶ Multiplication

▶ Addition

▶ Subtraction

Question No: 12 (Marks: 1)

If AX contains decimal -2 and BX contains decimal 2 then after the execution of instructions:
CMP AX, BX

JA label

- ▶ Zero flag will set
- ▶ Jump will be taken

► Zero flag will set

► ZF will contain value -4

► Jump will not be taken

Question No: 13 (Marks: 1)

The execution of the instruction "mov word [ES : 160], 0x1230" will print a character "0" on the screen at

- First column of second row
- Second column of first row
 - First column of second row
 - Second column of second row
 - First column of third row

Question No: 14 (Marks: 1)

If the direction of the processing of a string is from higher addresses towards lower addresses then

- DF is cleared
 - ZF is cleared
- DF is cleared
- ZF is set
- DF is set

Question No: 15 (Marks: 1)

The instruction ADC has_____ Operand(s)

- 3

- ▶ 0
- ▶ 1
- ▶ 2
- ▶ **3**

Question No: 16 (Marks: 1)

Which bit of the attributes byte represents the red component of background color ?

- 3

- ▶ 3
- ▶ 4
- ▶ 5
- ▶ 6

Question No: 17 (Marks: 2)

What is difference between SHR and SAR instructions?

SHR

The SHR inserts a zero from the left and moves every bit one position to the right and copy the rightmost bit in the carry flag.

SAR

The SAR shift every bit one place to the right with a copy of the most significant bit left at the most significant place. The bit dropped from the right is caught in the carry basket. The sign bit is retained in this operation.

Question No: 18 (Marks: 2)

For what purpose "INT 1" is reserved ?

Question No: 19 (Marks: 2)

Define implied operand?

It is always in a particular register say the accumulator. It needs to not be mentioned in the instruction.

Q=1:

Which bit of attributes byte represents the blue component of foreground color?

- 0**
- 1**
- 2**

-

-

-

0 0 , 1 ,

-

-

Int 13-bios disk service “generally uses which register to return the error flag?

- Q=13:

- Hard disk size
- Partition table
- Data size
- Sector size

Operating system organize data in the form of

- ☐ Folder
 ☐ Batch file
 ☐ File
 ☐ None of above

In 9 pin db 9 connector, which pin is assigned to TD(transmitted data)

- □ □ □ □ □ □ □ □ □ □ □ □ □ □ 1 □ □ □ □ □ □ □ □ □ □
- □ □ □ □ □ □ □ □ □ □ □ □ □ □ 2 □ □ □ □ □ □ □ □ □ □
- □ □ □ □ □ □ □ □ □ □ □ □ □ □ 3 □ □ □ □ □ □ □ □ □ □
- □ □ □ □ □ □ □ □ □ □ □ □ □ □ 4 □ □ □ □ □ □ □ □ □ □

Device derive can be divided into -----major categories.

- [illegible]

1. BL contains 5 decimal then after right shift , BL will become

-  3
-  2.5
-  5
-  10

2. 8 * 16 font is stored in _____ bytes.

- ☐ ☐ ☐ 3
- ☐ ☐ ☐ 4
- ☐ ☐ ☐ 8
- ☐ ☐ ☐ **16**

3. In DOS input buffer , number of characters actually read on return is stored in

- ☐ ☐ First byte
- ☐ ☐ **Second byte**
- ☐ ☐ Third byte
- ☐ ☐ Fourth byte

4. IRQ 0 has priority

- ☐ ☐ Low
- ☐ ☐ High
- ☐ ☒ **Highest**
- ☐ ☐ Medium

5. Thread registration code initialize PCB and add to linked list so that _____ will give it turn.

- ☐ ☐ Assembler
- ☐ ☐ Linker
- ☐ ☒ **Scheduler**
- ☐ ☐ Debugger

6. Traditional calling conventions are in _____ number

-   **1**
 •   **2**
 •   **3**
 •   **4**

7. VESA VEB 2.0 is standard for

- ☐ ☐ **High Resolution Mode**
- ☐ ☐ Low Resolution Mode
- ☐ ☐ Very High Resolution Mode
- ☐ ☐ Medium Resolution Mode

8. To clear direction flag which instruction is used

-   **Cld**
-   Clrd
-   Cl df

- ☐ ☐ ☐ ☐ Cldf

9. In STOSW instruction , When DI is cleared , SI is

- ☐ ☐ Incremented by 1
- ☒ ☐ **Incremented by 2**
- ☐ ☐ Decremented by 1
- ☐ ☐ Decremented by 2

10. Interrupt that is used in debugging with help of trap flag is

- ☐ ☐ INT 0
- ☒ ☐ **INT 1**
- ☐ ☐ INT 2
- ☐ ☐ INT 3

11. INT for arithmetic overflow is

- ☐ ☐ INT 1
- ☐ ☐ INT 2
- ☐ ☐ INT 3
- ☒ ☐ **INT 4**

12. IRQ referred as

- ☒ ☐ **Eight Input signals**
- ☐ ☐ One Input signal
- ☐ ☐ Eight Output signals
- ☐ ☐ One output signal

13. IRQ for keyboard is 1

14. IRQ for sound card is 5

15. IRQ for floppy disk is 6

16. IRQ with highest priority is

- ☐ ☐ Keyboard IRQ
- ☒ ☐ **Timer IRQ**
- ☐ ☐ Sound Card
- ☐ ☐ Floppy Disk

17. Pin for parallel port ground is

- ☐ ☐ 10-18
- ☒ ☐ **18-25**
- ☐ ☐ 25-32
- ☐ ☐ 32-39

18. The physical address of Interrupt Descriptor Table (IDT) is stored in

- ☐ ☐ GDTR
- ☒ ☐ **IDTR**
- ☐ ☐ IVT
- ☐ ☐ IDTT

19. Execution of "RET 2" results in?

20. CX register is

- ☐ ☐ **Count register**
- ☐ ☐ Data register
- ☐ ☐ Index register
- ☐ ☐ Base register

21. OUT instruction uses AX as source register.

22. IN DB-9 connector the Data Set ready pin is at

- ☐ ☐ 5
- ☐ ☐ **6**
- ☐ ☐ 7
- ☐ ☐ 8

23. If two devices uses same IRQ then there is

- ☐ ☐ IRQ collision
- ☐ ☐ **IRQ conflict**
- ☐ ☐ IRQ drop

24. VESA organizes 16 bit color for every pixel in ratio

- ☐ ☐ 5:5:5
- ☐ ☐ **5:6:5**
- ☐ ☐ 6:5:6
- ☐ ☐ 5:6:7

25. Division by zero is done by which interrupt.

Interrupt 0.

Question No: 1 (Marks: 1)

After the execution of SAR instruction

► **The msb is replaced by a 0**

► The msb is replaced by 1

► The msb retains its original value

- ▶ The msb is replaced by the value of CF

Question No: 2 (Marks: 1)

RETF will pop the offset in the

- ▶ BP
- ▶ IP
- ▶ SP
- ▶ SI

Question No: 3 (Marks: 1)

The routine that executes in response to an INT instruction is called

- ▶ ISR

- ▶ IRS

- ▶ ISP

- ▶ IRT

Question No: 4 (Marks: 1)

The first instruction of "COM" file must be at offset:

- ▶ 0x0010
- ▶ 0x0100
- ▶ 0x1000
- ▶ 0x0000

Question No: 5 (Marks: 1)

"Far" jump is not position relative but is _____

- ▶ memory dependent
- ▶ Absolute
- ▶ temporary
- ▶ indirect

Question No: 6 (Marks: 1)

Only _____ instructions allow moving data from memory to memory.

► string

- word
- indirect
- stack

Question No: 7 (Marks: 1)

After the execution of instruction "RET 2"

► SP is incremented by 2

► SP is decremented by 2

► SP is incremented by 4

► SP is decremented by 4

Question No: 8 (Marks: 1)

DIV instruction has

► Two forms

► Three forms

► Four forms

► Five forms

Question No: 9 (Marks: 1)

When the operand of DIV instruction is of 16 bits then implied dividend will be of

- ▶ 8 bits
- ▶ 16 bits
- ▶ **32 bits**
- ▶ 64 bits

Question No: 10 (Marks: 1)

After the execution of MOVS instruction which of the following registers are updated

- ▶ SI only

- ▶ DI only

- ▶ **SI and DI only**

- ▶ SI, DI and BP only

Question No: 11 (Marks: 1)

In 8088 architecture, whenever an element is pushed on the stack

- ▶ SP is decremented by 1
- ▶ **SP is decremented by 2**
- ▶ SP is decremented by 3
- ▶ SP is decremented by 4

Question No: 12 (Marks: 1)

When a very large number is divided by very small number so that the quotient is larger than the space provided, this is called

- ▶ Divide logical error

- ▶ **Divide overflow error**

► Divide syntax error

► An illegal instruction

Question No: 13 (Marks: 1)

In the word designated for one screen location, the higher address contains

► The character code

► The attribute byte

► The parameters

► The dimensions

Question No: 14 (Marks: 1)

Which of the following options contain the set of instructions to open a window to the video memory?

► mov AX, 0xb008

mov ES, AX

► mov AX, 0xb800

mov ES, AX

► mov AX, 0x8b00

mov ES, AX

► mov AX, 0x800b

mov ES, AX

Question No: 15 (Marks: 1)

In a video memory, each screen location corresponds to

► One byte

► Two bytes

► Four bytes

► Eight bytes

Question No: 16 (Marks: 1)

The execution of the instruction "mov word [ES : 0], 0x0741" will print character "A" on screen , background color of the screen will be

► **Black**

► White

► Red

► Blue

Question No: 1 ____ (M a r k s: 1)

Which of the following is not true about registers?

1. Their operation is very much like memory
2. Intermediate results may also be stored in registers.
3. They are also called scratch pad ram
4. None of given options.

Question No: 2 ____ (M a r k s: 1)

move [bp], al moves the one byte content of the AL register to the address contained in BP register in the current

1. Stack segment
2. Code segment
3. Data segment
4. Extra segment

Question No: 3 (M a r k s: 1)

In a rotate through carry right (RCR) instruction applied on a 16 bit word Effectively there is

1. 16 bits rotation
2. 1 bit rotation
3. 17 bits rotation
4. 8 bits rotation

Question No: 4__ (M a r k s: 1) - Please

choose one The 8088 stack works on

1. Word sized elements
2. Byte sized elements

- 3. Double sized element
- 4. Nible sized element

Question No: 5 (M a r k s: 1) - Please

choose one

An 8 x 16 font is stored in.....Bytes

- 1. 2
 - 2. 4
 - 3. 8
 - 4. 16
-
-

Question No: 6 (M a r k s: 1) - Please

INT 10 is used for.....services.

- 1. RAM
 - 2. Disk
 - 3. BIOS video
 - 4. DOS video
-
-

Question No: 7 _ (M a r k s: 1)

Priority of IRQ 0 interrupt is

- 1. medium
 - 2. high
 - 3. highest
 - 4. low
-
-

Question No: 8 _ (M a r k s: 1)

Threads can have function calls, parameters and _____ variables.

- 1. global
 - 2. local
 - 3. legal
 - 4. illegal
-
-

Question No: 9 _ (M a r k s: 1) - Please choose

one How many prevalent calling conventions do.....exist

- 1. 1
 - 2. 2
 - 3. 3
 - 4. 4
-
-

one In 9pin DB 9 DSR is assigned on pin number

- Question No: 11**

choose one In 9pin DB 9 CTS is assigned on pin number

- Question No: 12__ (M a r k s: 1)**

Question No: 13__ (M a r k s: 1)

Question No: 14 ____ (Marks: 1)

Question No: 15__ (M a r k s: 1)

[illegible]

Question No: 16 (M a r k s: 1) - Please choose

one In STOSB instruction, when DF is clear, SI is

1. Incremented by 1
2. Incremented by 2
3. Decrement by 1
4. Decrement by 2

Question No: 17 (M a r k s: 1) The

process of sending signals back and forth is called

1. Activity
2. Hand-shaking
3. Interruption
4. Time clicking

Question No: 18 (M a r k s: 1)

which of the following is a special type of interrupt that returns to the same instruction instead of the next instruction

1. Divide overflow interrupt
2. Debug interrupt
3. Arithmetic overflow interrupt
4. Change of sign interrupt

Question No: 19 ____ (M a r k s: 1)

Which of the following IRQs is derived by a timer device?

1. IRQ 0
2. IRQ 1
3. IRQ 2
4. IRQ 3

Question No: 20 ____ (M a r k s: 1)

Which of the following interrupts is used for Arithmetic overflow

1. INT 1
2. INT 2
3. INT 3
4. INT 4

Question No: 21 ____ (M a r k s: 1)

Which of the following IRQs is connected to serial port COM 2?

1. IRQ 0
2. IRQ 1
3. IRQ 2
4. IRQ 3

Question No: 22 __ (M a r k s: 1) - Please

choose one

An End of Interrupt (EOI) signal is sent by

1. Handler
2. Processor
3. IRQ
4. PIC

Question No: 23 __ (M a r k s: 1)

The source registers in OUT is

1. AL or AX
2. BL or BX
3. CL or CX
4. DL or DX

Question No: 24 (M a r k s: 1)

In programmable interrupt controller which of the following ports is used for selectively enabling or disabling interrupts

1. 19
2. 20
3. 21
4. 22

Question No: 25 (M a r k s: 1)

The number of pins in a parallel port connector are?

1. 25
2. 30
3. 35

Question No: 26 (M a r k s: 1)

Which of the following pins of a parallel port connector are grounded?

1. 10-18
2. 18-25
3. 25-32
4. 32-39

Question No: 27 __ (M a r k s: 1)

Suppose a decimal number 35 when its binary is shifted to write two places the new number will become

1. 35
2. 70
3. 140

Question No: 28 __ (M a r k s: 1)

A 32bit address register can access upto of memory so memory access has increased a lot.

1. 2GB
2. 4GB
3. 6GB
4. 8GB

Question No: 29 __ (Marks: 1)

In NASM an imported symbol is declared with the while and exported symbol is declared with the

1. Global directive, External directive
2. External directive, Global directive
3. Home Directive, Foreign Directive
4. Foreign Directive, Home Directive

Question No: 30 (Marks: 1) - Please choose

one Single step interrupt is

1. Hardware interrupt
2. Like divide by zero interrupt
3. Like divide by 1 interrupt
4. Software interrupt

Question No: 31 ____ (Marks: 1)

Which services are gained by INT 0x16

Solution:

Hardware interrupt

Like divide by zero interrupt

Like divide by 1 interrupt

Software interrupt

Question No: 32 (Marks: 1

Give the name of any one VESA service

- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ ☐ ☐ ☐ Hardware interrupt
- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Like divide by zero interrupt
- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Like divide by 1 interrupt
- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Software interrupt ☐ ☐

Question No: 33 (Marks: 2)

By using above port what do AH,AL and DX shows here?

[illegible]

What do these instructions do ? write your answer in single line.

loop \$

- ### Define the protected mode

Write a program in assembly language to disable keyboard interrupt using PIC

Hint: Only five instructions are needed

Read the following passage carefully and fill the blanks with proper words.

"BIOS sees the disks as a combination of sectors, tracks, and....., as a raw storage device without concern to whether it is reading a file or directory.

Solution:

- Question No: 1 (Marks: 1)**

1. 16bit
2. 32bit
3. 64bit
4. 20bit

When the subprogram finishes, the _____ retrieves the return address from the stack and transfers control to that location.

1. segment registers
2. segment selectors
3. stack pointers
4. register pointers

Question No: 6 (Marks: 1)

IRQ 0 interrupt have _____ priority

1. low
2. medium
3. highest
4. lowest

Question No: 7 (Marks: 1)

IDT stands for _____.

1. interrupt descriptor table
2. individual descriptor table
3. inline data table
4. interrupt descriptor table

Question No: 8 (Marks: 1)

Every bit of line status in serial port conveys _____ information.

1. different
2. same
3. partial
4. full

Question No: 9 (Marks: 1)

There are total _____ bytes in a standard floppy disk.

1. 1444k
2. 1440k
3. 1280k
4. 2480k

Question No: 10 (Marks: 1)

An 8x16 font is stored in _____ bytes.

- ☐ 8
- ☐ 16
- ☐ 4
- ☐ 20

=====

. Serial Port is also accessible via I/O ports , COM 1 is accessible via ports 3F8-3FF while COM 2 is accessible via 2F8 -2FF.

The first register at 3F8 is the Transmitter holding register if written to and the receiver buffer register if read from.

Other register of our interest include 3F9 whose Bit 0 must be set to enable received data available interrupt and Bit 1 must be set to enable transmitter holding register empty interrupt.

(Transmitter, COM 1, I/O ports , COM2. bit 0 , Buffer , 3FA)

=====

Question # 1

There are three busses to communicate the processor and memory named as _____

- 1) : address bus.,data bus and data bus.
- 2) : addressing bus.,data bus and data bus.
- 3) : address bus.,datamove bus and data bus.
- 4) : address bus.,data bus and control bus..

Correct Option : 4 From : Lecture 1

Question # 2

The address bus is unidirectional and address always travels from processor to memory.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 1

Question # 3

Data bus is bidirectional because _____

- 1) : To way
- 2) : Data moves from both, processor to memory and memory to processor,
- 3) : Data moves from both, processor to memory and memory to data Bus,
- 4) : None of the Given

Correct Option : 3 From : Lecture 1

Question # 4

Control bus _____

- 1) : is Not Important.
- 2) : is Important .
- 3) : bidirectional.
- 4) : unidirectional .

Correct Option : 3 From : Lecture 1

Question # 5

A memory cell is an n-bit location to store data, normally _____ also called a byte

- 1) : 4-bit
- 2) : 8-bit
- 3) : 6-bit
- 4) : 80-bit

Correct Option : 2 From : Lecture 1

Question # 6

The number of bits in a cell is called the cell width. _____ define the memory completely.

- 1) : Cell width and number of cells,
- 2) : cell number and width of the cells,
- 3) : width
- 4) : Height

Correct Option : 1 From : Lecture 1

Question # 7

for memory we define two dimensions. The first dimension defines how many _____ bits are there in a single memory cell.

- 1) : parallel
- 2) : Vertical
- 3) : long
- 4) : short

Correct Option : 1 From : Lecture 1

Question # 8

_____ operation requires the same size of data bus and memory cell width.

- 1) : Normal
- 2) : Best and simplest
- 3) : first
- 4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 9

Control bus is only the mechanism. The responsibility of sending the appropriate signals on the control bus to the memory is of the _____.

- 1) : Data Bus
- 2) : processor
- 3) : Address Bus
- 4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 10

In "total: dw 0 " Opcode total is a _____

- 1) : Literal
- 2) : Variable
- 3) : Label
- 4) : Starting point

Correct Option : 3 From : Lecture 10

Question # 11

| 0 | --> | 1 | 1 | 0 | 1 | 0 | 0 | 0 | --> | C | is a example of _____

- 1) : Shl
- 2) : sar
- 3) : Shr
- 4) : Sal

Correct Option : 3 From : Lecture 10

Question # 12

| C | <-- | 1 | 1 | 0 | 1 | 0 | 0 | 0 | <-- | 0 | is a example of _____

- 1) : Shl
- 2) : sar
- 3) : Shr
- 4) : Sal

Correct Option : 1 From : Lecture 10

Question # 13

ADC has _____ operands.

- 1) : two
- 2) : three
- 3) : Five
- 4) : Zero

Correct Option : 2 From : Lecture 10

Question # 14

The basic purpose of a computer is to perform operations, and operations need _____.

- 1) : order
- 2) : nothing
- 3) : operands
- 4) : bit

Correct Option : 3 From : Lecture 2

Question # 15

Registers are like a scratch pad ram inside the processor and their operation is very much like normal_____.

- 1) : Number
- 2) : operations
- 3) : memory cells
- 4) : None of the Given

Correct Option : 3 From : Lecture 2

Question # 16

There is a central register in every processor called the _____ and The word size of a processor is defined by the width of its_____.

- 1) : accumulator,accumulator
- 2) : data bus,accumulator
- 3) : accumulator, Address Bus
- 4) : accumulator,memory

Correct Option : 1 From : Lecture 2

Question # 17

_____does not hold data but holds the address of data

- 1) : Pointer, Segment, or Base Register
- 2) : Pointer, Index, or Base Register
- 3) : General Registers
- 4) : Instruction Pointer

Correct Option : 2 From : Lecture 2

Question # 18

"The program counter holds the address of the next instruction to be _____"

- 1) : executed.
- 2) : called
- 3) : deleted
- 4) : copy

Correct Option : 1 From : Lecture 2

Question # 19

There are _____ types of "instruction groups"

- 1) : 4
- 2) : 5
- 3) : 3
- 4) : 2

Correct Option : 1 From : Lecture 2

Question # 20

These instructions are used to move data from one place to another.

- 1) : TRUE

2) : FALSE

3) :

4) :

Correct Option : 1 From : Lecture 2

Question # 21

"mov" instruction is related to the _____ *****.

1) : Arithmetic and Logic Instructions

2) : Data Movement Instructions

3) : Program Control Instructions

4) : Special Instructions

Correct Option : 2 From : Lecture 2

Question # 22

_____ allow changing specific processor behaviors and are used to play with it.

1) : Special Instructions

2) : Data Movement Instructions

3) : Program Control Instructions

4) : Arithmetic and Logic Instructions

Correct Option : 1 From : Lecture 2

Question # 23

8088 is a 16bit processor with its accumulator and all registers of _____.

1) : 32 bits

2) : 6 bits

3) : 16 bits

4) : 64 bits

Correct Option : 3 From : Lecture 2

Question # 24

The _____ of a processor means the organization and functionalities of the registers it contains and the instructions that are valid on the processor.

1) : Manufactures

2) : architecture

3) : Deal

4) : None of the Given

Correct Option : 2 From : Lecture 2

Question # 25

Intel IAPX88 Architecture is _____

1) : More then 25 old

2) : New

3) : Not Good

4) : None of the Given

Correct Option : 1 From : Lecture 2

Question # 26

The iAPX88 architecture consists of _____ registers.

1) : 13

2) : 12

3) : 9

4) : 14

Correct Option : 4 From : Lecture 3

Question # 27

General Registers are _____

- 1) : AX, BX, CX, and DX
- 2) : XA, BX, CX, and DX
- 3) : SS, SI and DI
- 4) : 3

Correct Option : 1 From : Lecture 3

Question # 28

AX means we are referring to the extended 16bit "A" register. Its upper and lower byte are separately accessible as _____.

- 1) : AH and AL
- 2) : A Lower and A Upper
- 3) : AL, AU
- 4) : AX

Correct Option : 1 From : Lecture 3

Question # 29

AX is General purpose Register where A stands for _____.

- 1) : Academic
- 2) : Ado
- 3) : Architecture
- 4) : Accumulator

Correct Option : 4 From : Lecture 3

Question # 30

The B of BX stands for _____ because of its role in memory addressing.

- 1) : Busy
- 2) : Base
- 3) : Better
- 4) : None of the Given

Correct Option : 2 From : Lecture 3

Question # 31

The D of DX stands for Destination as it acts as the destination in _____.

- 1) : I/O operations
- 2) : operations
- 3) : memory cells
- 4) : Memory I/O operations

Correct Option : 1 From : Lecture 3

Question # 32

The C of CX stands for Counter as there are certain instructions that work with an automatic count in the _____.

- 1) : DI register
- 2) : BX register
- 3) : CX register
- 4) : DX register

Correct Option : 3 From : Lecture 3

Question # 33

_____ are the index registers of the Intel architecture which hold address of data and used in memory access.

- 1) : SI and SS

- 2) : PI and DI
- 3) : SI and IP
- 4) : SI and DI

Correct Option : 4 From : Lecture 3

Question # 34

In Intel IAPX88 architecture _____ is the special register containing the address of the next instruction to be executed.

- 1) : AX
- 2) : PI
- 3) : IP
- 4) : SI

Correct Option : 3 From : Lecture 3

Question # 35

SP is a memory pointer and is used indirectly by a set of _____.

- 1) : instructions
- 2) : Pointers
- 3) : Indexes
- 4) : Variables

Correct Option : 1 From : Lecture 3

Question # 36

_____ is also a memory pointer containing the address in a special area of memory called the stack.

- 1) : SP
- 2) : BP
- 3) : PB
- 4) : AC

Correct Option : 2 From : Lecture 3

Question # 37

_____ is bit wise significant and accordingly each bit is named separately.

- 1) : AX
- 2) : FS
- 3) : IP
- 4) : Flags Register

Correct Option : 4 From : Lecture 3

Question # 38

When two 16bit numbers are added the answer can be 17 bits long, this extra bit that won't fit in the target register is placed in the _____ where it can be used and tested

- 1) : carry flag
- 2) : Parity Flag
- 3) : Auxiliary Carry
- 4) : Zero Flag

Correct Option : 1 From : Lecture 3

Question # 39

Program is an ordered set of instructions for the processor.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 3

Question # 40

For Intel Architecture "operation destination, source" is way of writing things.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 3

Question # 41

Operation code " add ax, bx " _____.

- 1) : Add the bx to ax and change the bx
- 2) : Add the ax to bx and change the ax
- 3) : Add the bx to ax and change the ax
- 4) : Add the bx to ax and change nothing

Correct Option : 3 From : Lecture 3

Question # 42

The maximum memory iAPX88 can access is _____.

- 1) : 1MB
- 2) : 2MB
- 3) : 3MB
- 4) : 128MB

Correct Option : 1 From : Lecture 4

Question # 43

The maximum memory iAPX88 can access is 1MB which can be accessed with _____.

- 1) : 18 bits
- 2) : 20 bits
- 3) : 16 bits
- 4) : 2 bits

Correct Option : 2 From : Lecture 4

Question # 44

_____ address of 1DED0 where the opcode B80500 is placed.

- 1) : physical memory
- 2) : memory
- 3) : effective
- 4) : None of the Given

Correct Option : 1 From : Lecture 4

Question # 45

16 bit of Segment and Offset Addresses can be converted to 20bit Address i.e

Segment Address with lower four bits zero + Offset Address with _____ four bits zero = 20bit Physical Address

- 1) : Middle
- 2) : lower
- 3) : Top
- 4) : upper

Correct Option : 4 From : Lecture 4

Question # 46

When adding two 20bit Addresses a carry if generated is dropped without being stored anywhere and the phenomenon is called address_____.

- 1) : wraparound

- 2) : mode
- 3) : ping
- 4) : error

Correct Option : 1 From : Lecture 4

Question # 47

segments can only be defined a 16byte boundaries called _____ boundaries.

- 1) : segment
- 2) : paragraph
- 3) : Cell
- 4) : RAM

Correct Option : 1 From : Lecture 4

Question # 48

in a Program CS, DS, SS, and ES all had the same value in them. This is called _____.

- 1) : equal memory
- 2) : overlapping segments
- 3) : segments hiding
- 4) : overlapping SI

Correct Option : 2 From : Lecture 4

Question # 49

"db num1" size of the memory is _____

- 1) : 1byte
- 2) : 4bit
- 3) : 16bit
- 4) : 2byte

Correct Option : 1 From : Lecture 5

Question # 50

```
" 1-----[org 0x0100]
2-----mov ax, [num1] ; load first number in ax
3-----mov bx, [num2] ; load second number in bx
4-----add ax, bx _____
5-----int 0x21
6-----
7-----num1: dw 5
8-----num2: dw 10
```

Comments for the 4 are :

- 1) : No comments Will be
- 2) : ; accumulate sum in add
- 3) : ; accumulate sum in ax
- 4) : ; accumulate sum in Bx

Correct Option : 3 From : Lecture 5

Question # 51

In " mov ax, bx " is _____ Addressing Modes.

- 1) : Immediate
- 2) : Indirect
- 3) : Direct
- 4) : Register

Correct Option : 4 From : Lecture 5

Question # 52

In "mov ax, [bx]" is _____ Addressing Modes

- 1) : Based Register Indirect
- 2) : Indirect
- 3) : Base Indirect
- 4) : Immediate

Correct Option : 1 From : Lecture 5

Question # 53

In "mov ax, 5" is _____ Addressing Modes

- 1) : Immediate
- 2) : Indirect
- 3) : Indirect
- 4) : Register

Correct Option : 1 From : Lecture 6

Question # 54

In "mov ax, [num1+bx]" is _____ ADDRESSING

- 1) : OFFSET+ Indirect
- 2) : Register + Direct
- 3) : Indirect + Reference
- 4) : BASEd REGISTER + OFFSET

Correct Option : 4 From : Lecture 7

Question # 55

"base + offset addressing" gives This number which came as the result of addition is called the _____.

- 1) : Address
- 2) : mode
- 3) : effective address
- 4) : Physical Address

Correct Option : 3 From : Lecture 7

Question # 56

"mov ax, [cs:bx]" associates _____ for this one instruction

- 1) : CS with BX
- 2) : BX with CS
- 3) : BX with AX
- 4) : None of the Given

Correct Option : 2 From : Lecture 7

Question # 57

For example

BX=0100

DS=FFF0

And Opcode are;

move [bx+0x0100], Ax

now what is the effective memory address;

- 1) : 0020
- 2) : 0200
- 3) : 0300
- 4) : 0x02

Correct Option : 2 From : Lecture 7

Question # 58

For example

BX=0100

DS=FFF0

And Opcode are;

move [bx+0x0100], Ax

now what is the physical memory address;

1) : 0020

2) : 0x0100

3) : 0x10100

4) : 0x100100

Correct Option : 2 From : Lecture 7

Question # 59

In " mov [1234], al " is _____ Addressing Modes.

1) : Immediate

2) : Indirect

3) : Direct

4) : Register

Correct Option : 3 From : Lecture 8

Question # 60

In " mov [SI], AX " is _____ Addressing Modes.

1) : Base Register Indirect

2) : Indirect

3) : Indexed Register Indirect

4) : Immediate

Correct Option : 3 From : Lecture 8

Question # 61

In " mov ax, [bx - SI] " is _____ ADDRESSING

1) : Base Register Indirect

2) : Indirect

3) : Direct

4) : illegal

Correct Option : 4 From : Lecture 8

Question # 62

In " mov ax, [BL] " there is error i.e. _____

1) : Address must be 16bit

2) : Address must be 8bit

3) : Address must be 4bit

4) : 8 bit to 16 bit move illegal

Correct Option : 4 From : Lecture 8

Question # 63

In " mov ax, [SI+DI] " there is error i.e. _____

1) : Two indexes can't use as Memory Address

2) : index can't use as Memory Address

3) : I don't Know

4) : None of the Given

Correct Option : 1 From : Lecture 8

Question # 64

In JNE and JNZ there is difference for only _____;

- 1) : Programmer or Logic
- 2) : Assembler
- 3) : Debugger
- 4) : IAPX88

Correct Option : 1 From : Lecture 9

Question # 65

JMP is Instruction that on executing take jump regardless of the state of all flags is called _____

- 1) : Jump
- 2) : Conditional jump
- 3) : Unconditional jump
- 4) : Stay

Correct Option : 3 From : Lecture 9

Question # 66

When result of the source subtraction from the destination is zero, zero flag is set i.e. ZF=1
its mean that;

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : DEST < SRC
- 4) : DEST > SRC

Correct Option : 1 From : Lecture 9

Question # 67

When an unsigned source is subtracted from an unsigned destination and the destination is smaller, borrow is needed which sets the _____.

- 1) : carry flag i.e CF = 0
- 2) : carry flag i.e CF = 1
- 3) : Carry Flag + ZF=1
- 4) : None of the Given

Correct Option : 2 From : Lecture 9

Question # 68

In the case of unassigned source and destination when subtracting and in the result ZF =1 OR CR=1 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST ? USRC
- 4) : DEST > SRC

Correct Option : 3 From : Lecture 9

Question # 69

In the case of unassigned source and destination when subtracting and in the result ZF =0 AND CR=0 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST < USRC
- 4) : UDEST > USRC

Correct Option : 4 From : Lecture 9

Question # 70

In the case of unassigned source and destination when subtracting and in the result CR=0 then _____

- 1) : DEST = SRC

- 2) : DEST != SRC
- 3) : UDEST < USRC
- 4) : UDEST ? USRC

Correct Option : 4 From : Lecture 9

Question # 71

_____ This jump is taken if the last arithmetic operation produced a zero in its destination. After a CMP it is taken if both operands were equal.

- 1) : Jump if zero(JZ)/Jump if equal(JE)
- 2) : Jump if equal(JE)
- 3) : Jump if zero(JZ)
- 4) : No Jump for This

Correct Option : 1 From : Lecture 9

Question # 72

_____ This jump is taken after a CMP if the unsigned source is smaller than or equal to the unsigned destination.

- 1) : JBE(Jump if not below or equal)
- 2) : JNA(Jump if not above)/JBE(Jump if not below or equal)
- 3) : JNA(Jump if not above)
- 4) : No Jump for This

Correct Option : 2 From : Lecture 9

Question # 1

Numbers of any size can be added using a proper combination of _____.

- 1) : ADD and ADC
- 2) : ABD and ADC
- 3) : ADC and ADC
- 4) : None of the Given

Correct Option : 1 From : Lecture 11

Question # 2

Like addition with carry there is an instruction to subtract with borrows called _____.

- 1) : SwB
- 2) : SBB
- 3) : SBC
- 4) : SBBC

Correct Option : 2 From : Lecture 11

Question # 3

if "and ax, bx" instruction is given, There are _____ operations as a result

- 1) : 16 AND
- 2) : 17 AND
- 3) : 32 AND
- 4) : 8 AND

Correct Option : 1 From : Lecture 12

Question # 4

_____ can be used to check whether particular bits of a number are set or not.

- 1) : AND
- 2) : OR
- 3) : XOR
- 4) : NOT

Correct Option : 1 From : Lecture 12

Question # 5

_____ can also be used as a masking operation to invert selective bits.

- 1) : AND
- 2) : OR
- 3) : XOR
- 4) : NOT

Correct Option : 3 From : Lecture 12

Question # 6

Masking Operations are Selective Bit _____

- 1) : Clearing, XOR, Inversion and Testing
- 2) : Clearing, Setting, Inversion and Testing
- 3) : Clearing, XOR, AND and Testing
- 4) : None of the Given

Correct Option : 2 From : Lecture 12

Question # 7

The _____ instruction allows temporary diversion and therefore reusability of code.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 1 From : Lecture 13

Question # 8

CALL takes a label as _____ and execution starts from that label,

- 1) : argument
- 2) : Lable
- 3) : TXt
- 4) : Register

Correct Option : 1 From : Lecture 13

Question # 9

When the _____ instruction is encountered and it takes execution back to the instruction following the CALL.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 2 From : Lecture 13

Question # 10

_____ Both the instructions are commonly used as a pair, however technically they are independent in their operation.

- 1) : RET and ADC
- 2) : Cal and SSb
- 3) : CALL and RET
- 4) : ADC and SSB

Correct Option : 3 From : Lecture 13

Question # 11

The CALL mechanism breaks the thread of execution and does not change registers, except _____.

- 1) : SI
- 2) : IP

- 3) : DI
- 4) : SP

Correct Option : 2 From : Lecture 13

Question # 12

Stack is a _____ that behaves in a first in last out manner.

- 1) : Program
- 2) : data structure
- 3) : Heap
- 4) : None of the Given

Correct Option : 2 From : Lecture 14

Question # 13

If _____ is not available, stack clearing by the callee is a complicated process.

- 1) : CALL
- 2) : SBB
- 3) : RET n
- 4) : None of the Given

Correct Option : 3 From : Lecture 14

Question # 14

When the stack will eventually become full, SP will reach 0, and thereafter wraparound producing unexpected results. This is called stack _____

- 1) : Overflow
- 2) : Leakage
- 3) : Error
- 4) : Pointer

Correct Option : 1 From : Lecture 14

Question # 15

The pop operation makes a copy from the top of the stack into its _____.

- 1) : Register
- 2) : operand
- 3) : RET n
- 4) : Pointer

Correct Option : 2 From : Lecture 14

Question # 16

_____ decrements SP (the stack pointer) by two and then transfers a word from the source operand to the top of stack

- 1) : PUSH
- 2) : POP
- 3) : CALL
- 4) : RET

Correct Option : 1 From : Lecture 14

Question # 17

POP transfers the word at the current top of stack (pointed to by SP) to the destination operand and then _____ SP by two to point to the new top of stack.

- 1) : increments
- 2) : decrements
- 3) : ++
- 4) : --

Correct Option : 1 From : Lecture 14

Question # 18

The trick is to use the _____ and _____ operations and save the callers' value on the stack and recover it from there on return.

- 1) : POP, ADC
- 2) : CALL, RET
- 3) : CALL, RET n
- 4) : PUSH, POP

Correct Option : 4 From : Lecture 14

Question # 19

To access the arguments from the stack, the immediate idea that strikes is to _____ them off the stack.

- 1) : PUSH
- 2) : POP
- 3) : CALL
- 4) : Rrgister

Correct Option : 2 From : Lecture 15

Question # 20

push bp

we are _____

- 1) : sending bp copy to stack
- 2) : making bp copy from stack
- 3) : pushing bp on the stack
- 4) : doing nothing

Correct Option : 3 From : Lecture 15

Question # 21

Local Variables means variables that are used within the _____

- 1) : Subroutine
- 2) : Program
- 3) : CALL
- 4) : Label

Correct Option : 1 From : Lecture 15

Question # 22

Standard ASCII has 128 characters with assigned numbers from _____.

- 1) : 1to 129
- 2) : 0 to 127
- 3) : 0 to 128
- 4) : None of the Given

Correct Option : 2 From : Lecture 16

Question # 23

When _____ is sent to the VGA card, it will turn pixels on and off in such a way that a visual representation of 'A' appears on the screen.

- 1) : 0x60
- 2) : 0x90
- 3) : 0x30
- 4) : 0x40

Correct Option : 4 From : Lecture 16

Question # 24

Which bit is refer to the Blinking of foreground character

- 1) : 6
- 2) : 7
- 3) : 5
- 4) : 3

Correct Option : 2 From : Lecture 16

Question # 25

Which bit is refer to the Intensity component of foreground color

- 1) : 4
- 2) : 5
- 3) : 3
- 4) : 7

Correct Option : 3 From : Lecture 16

Question # 26

Which bit is refer to the Green component of background color

- 1) : 1
- 2) : 5
- 3) : 3
- 4) : 7

Correct Option : 2 From : Lecture 16

Question # 27

Which bit is refer to the Green component of foreground color

- 1) : 1
- 2) : 5
- 3) : 3
- 4) : 7

Correct Option : 1 From : Lecture 16

Question # 28

String can be indicate bye given

- 1) : db 0x61, 0x61, 0x63
- 2) : db 'a', 'b', 'c'
- 3) : db 'abc'
- 4) : All of the above

Correct Option : 4 From : Lecture 16

Question # 29

The first form divides a 32bit number in DX:AX by its 16bit operand and stores the _____ quotient in AX

- 1) : 16bit
- 2) : 17bit
- 3) : 32bit
- 4) : 64bit

Correct Option : 1 From : Lecture 17

Question # 30

The _____ (division) used in the process is integer division and not floating point division.

- 1) : DIV instruction
- 2) : ADC instruction
- 3) : SSB instruction
- 4) : DIVI instruction

Correct Option : 1 From : Lecture 17

Question # 31

_____ (multiply) performs an unsigned multiplication of the source operand and the accumulator.

- 1) : Multi
- 2) : DIV
- 3) : MUL
- 4) : Move

Correct Option : 3 From : Lecture 18

Question # 32

The desired location on the screen can be calculated with the following formulae.

- 1) : $\text{location} = (\text{hypos} * 80 + \text{SP}) * 3$
- 2) : $\text{location} = (\text{hypos} * 80 + \text{slocation}) * 2$
- 3) : $\text{location} = (\text{hypos} * 80 + \text{epos}) * 2$
- 4) : None of the Given

Correct Option : 3 From : Lecture 18

Question # 33

To play with string there are 5 instructions that are _____

- 1) : STOS, LODS, CMPS, SCAS, and MOVS
- 2) : MUL, DIV, ADD, ADC and MOVE
- 3) : SSB, ADD, CMPS, ADC, and MOVS
- 4) : None of the Given

Correct Option : 1 From : Lecture 18

Question # 34

_____ transfers a byte or word from register AL or AX to the string element addressed by ES:DI and updates DI to point to the next location.

- 1) : LODS
- 2) : STOS
- 3) : SCAS
- 4) : MOVE

Correct Option : 2 From : Lecture 18

Question # 35

_____ transfers a byte or word from the source location DS:SI to AL or AX and updates SI to point to the next location.

- 1) : LODS
- 2) : STOS
- 3) : SCAS
- 4) : MOVE

Correct Option : 1 From : Lecture 18

Question # 36

_____ compares a source byte or word in register AL or AX with the destination string element addressed by ES: DI and updates the flags.

- 1) : LODS
- 2) : STOS
- 3) : SCAS
- 4) : MOVE

Correct Option : 3 From : Lecture 18

Question # 37

_____ repeat the following string instruction while the zero flag is set and REPNE or REPNZ repeat the following instruction while the zero flag is not set.

- 1) : REP or REPZ
- 2) : REPE or REPZ
- 3) : REPE or RPZ
- 4) : RPE or REPZ

Correct Option : 2 From : Lecture 18

Question # 38

LES loads _____

- 1) : ES
- 2) : DS
- 3) : PS
- 4) : LS

Correct Option : 1 From : Lecture 20

Question # 39

LDS loads _____.

- 1) : ES
- 2) : DS
- 3) : PS
- 4) : LS

Correct Option : 2 From : Lecture 20

Question # 40

REP allows the instruction to be repeated _____ times allowing blocks of memory to be copied.

- 1) : DX
- 2) : CX
- 3) : BX
- 4) : AX

Correct Option : 2 From : Lecture 20

Question # 41

_____ pops IP, then CS, and then FLAGS.

- 1) : Ret n
- 2) : REZA
- 3) : REPE
- 4) : IRET

Correct Option : 4 From : Lecture 21

Question # 42

_____, Trap, Single step Interrupt

- 1) : INT 0
- 2) : INT 1
- 3) : INT 3
- 4) : INT 0

Correct Option : 2 From : Lecture 21

Question # 43

_____, NMI-Non Maskable Interrupt

- 1) : INT 0
- 2) : INT 1
- 3) : INT 3
- 4) : INT 0

Correct Option : 3 From : Lecture 21

Question # 44

To hook an interrupt we change the _____ corresponding to that interrupt.

- 1) : SX
- 2) : vector
- 3) : AX
- 4) : BX

Correct Option : 2 From : Lecture 22

Question # 1

_____ pops IP, then CS, and then FLAGS.

- 1) : Ret n
- 2) : REZA
- 3) : REPE
- 4) : IRET

Correct Option : 4 From : Lecture 21

Question # 2

_____, Trap, Single step Interrupt

- 1) : INT 0
- 2) : INT 1
- 3) : INT 3
- 4) : INT 0

Correct Option : 2 From : Lecture 21

Question # 3

_____, NMI-Non Maskable Interrupt

- 1) : INT 0
- 2) : INT 1
- 3) : INT 3
- 4) : INT 0

Correct Option : 3 From : Lecture 21

Question # 4

To hook an interrupt we change the _____ corresponding to that interrupt.

- 1) : SX
- 2) : vector
- 3) : AX
- 4) : BX

Question # 1

There are three busses to communicate the processor and memory named as _____

- 1) : address bus.,data bus and data bus.
- 2) : addressing bus.,data bus and data bus.
- 3) : address bus.,datamove bus and data bus.
- 4) : address bus.,data bus and control bus..

Correct Option : 4 From : Lecture 1

Question # 2

The address bus is unidirectional and address always travels from processor to memory.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 1

Question # 3

Data bus is bidirectional because_____

- 1) : To way
- 2) : Data moves from both, processor to memory and memory to processor,
- 3) : Data moves from both, processor to memory and memory to data Bus,
- 4) : None of the Given

Correct Option : 3 From : Lecture 1

Question # 4

Control bus_____

- 1) : is Not Important.
- 2) : is Important .
- 3) : bidirectional.
- 4) : unidirectional .

Correct Option : 3 From : Lecture 1

Question # 5

A memory cell is an n-bit location to store data, normally _____also called a byte

- 1) : 4-bit
- 2) : 8-bit
- 3) : 6-bit
- 4) : 80-bit

Correct Option : 2 From : Lecture 1

Question # 6

The number of bits in a cell is called the cell width._____define the memory completely.

- 1) : Cell width and number of cells,
- 2) : cell number and width of the cells,
- 3) : width
- 4) : Height

Correct Option : 1 From : Lecture 1

Question # 7

for memory we define two dimensions. The first dimension defines how many _____bits are there in a single memory cell.

- 1) : parallel
- 2) : Vertical

3) : long

4) : short

Correct Option : 1 From : Lecture 1

Question # 8

_____ operation requires the same size of data bus and memory cell width.

1) : Normal

2) : Best and simplest

3) : first

4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 9

Control bus is only the mechanism. The responsibility of sending the appropriate signals on the control bus to the memory is of the _____.

1) : Data Bus

2) : processor

3) : Address Bus

4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 10

In "total: dw 0 " Opcode total is a _____

1) : Literal

2) : Variable

3) : Label

4) : Starting point

Correct Option : 3 From : Lecture 10

Question # 11

| 0 | --> | 1 | 1 | 0 | 1 | 0 | 0 | 0 | --> | C | is a example of _____

1) : Shl

2) : sar

3) : Shr

4) : Sal

Correct Option : 3 From : Lecture 10

Question # 12

| C | <-- | 1 | 1 | 0 | 1 | 0 | 0 | 0 | <-- | 0 | is a example of _____

1) : Shl

2) : sar

3) : Shr

4) : Sal

Correct Option : 1 From : Lecture 10

Question # 13

ADC has _____ operands.

1) : two

2) : three

3) : Five

4) : Zero

Correct Option : 2 From : Lecture 10

Question # 14

The basic purpose of a computer is to perform operations, and operations need _____.

- 1) : order
- 2) : nothing
- 3) : operands
- 4) : bit

Correct Option : 3 From : Lecture 2

Question # 15

Registers are like a scratch pad ram inside the processor and their operation is very much like normal _____.

- 1) : Number
- 2) : operations
- 3) : memory cells
- 4) : None of the Given

Correct Option : 3 From : Lecture 2

Question # 16

There is a central register in every processor called the _____ and The word size of a processor is defined by the width of its _____.

- 1) : accumulator, accumulator
- 2) : data bus, accumulator
- 3) : accumulator, Address Bus
- 4) : accumulator, memory

Correct Option : 1 From : Lecture 2

Question # 17

_____ does not hold data but holds the address of data

- 1) : Pointer, Segment, or Base Register
- 2) : Pointer, Index, or Base Register
- 3) : General Registers
- 4) : Instruction Pointer

Correct Option : 2 From : Lecture 2

Question # 18

"The program counter holds the address of the next instruction to be _____"

- 1) : executed.
- 2) : called
- 3) : deleted
- 4) : copy

Correct Option : 1 From : Lecture 2

Question # 19

There are _____ types of "instruction groups"

- 1) : 4
- 2) : 5
- 3) : 3
- 4) : 2

Correct Option : 1 From : Lecture 2

Question # 20

These instructions are used to move data from one place to another.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 2

Question # 21

"mov" instruction is related to the _____ Group.

- 1) : Arithmetic and Logic Instructions
- 2) : Data Movement Instructions
- 3) : Program Control Instructions
- 4) : Special Instructions

Correct Option : 2 From : Lecture 2

Question # 22

_____ allow changing specific processor behaviors and are used to play with it.

- 1) : Special Instructions
- 2) : Data Movement Instructions
- 3) : Program Control Instructions
- 4) : Arithmetic and Logic Instructions

Correct Option : 1 From : Lecture 2

Question # 23

8088 is a 16bit processor with its accumulator and all registers of _____.

- 1) : 32 bits
- 2) : 6 bits
- 3) : 16 bits
- 4) : 64 bits

Correct Option : 3 From : Lecture 2

Question # 24

The _____ of a processor means the organization and functionalities of the registers it contains and the instructions that are valid on the processor.

- 1) : Manufactures
- 2) : architecture
- 3) : Deal
- 4) : None of the Given

Correct Option : 2 From : Lecture 2

Question # 25

Intel IAPX88 Architecture is _____

- 1) : More then 25 old
- 2) : New
- 3) : Not Good
- 4) : None of the Given

Correct Option : 1 From : Lecture 2

Question # 26

The iAPX88 architecture consists of _____ registers.

- 1) : 13
- 2) : 12
- 3) : 9
- 4) : 14

Correct Option : 4 From : Lecture 3

Question # 27

General Registers are _____

- 1) : AX, BX, CX, and DX
- 2) : XA, BX, CX, and DX

3) : SS,SI and DI

4) : 3

Correct Option : 1 From : Lecture 3

Question # 28

AX means we are referring to the extended 16bit "A" register. Its upper and lower byte are separately accessible as _____.

1) : AH and AL

2) : A Lower and A Upper

3) : AL, AU

4) : AX

Correct Option : 1 From : Lecture 3

Question # 29

AX is General purpose Register where A stands for _____.

1) : Acadmic

2) : Ado

3) : Architecture

4) : Accumulator

Correct Option : 4 From : Lecture 3

Question # 30

The B of BX stands for _____ because of its role in memory addressing.

1) : Busy

2) : Base

3) : Better

4) : None of the Given

Correct Option : 2 From : Lecture 3

Question # 31

The D of DX stands for Destination as it acts as the destination in _____.

1) : I/O operations

2) : operations

3) : memory cells

4) : Memory I/O operations

Correct Option : 1 From : Lecture 3

Question # 32

The C of CX stands for Counter as there are certain instructions that work with an automatic count in the _____.

1) : DI register

2) : BX register

3) : CX register

4) : DX register

Correct Option : 3 From : Lecture 3

Question # 33

_____ are the index registers of the Intel architecture which hold address of data and used in memory access.

1) : SI and SS

2) : PI and DI

3) : SI and IP

4) : SI and DI

Correct Option : 4 From : Lecture 3

Question # 34

In Intel IAPX88 architecture _____ is the special register containing the address of the next instruction to be executed.

- 1) : AX
- 2) : PI
- 3) : IP
- 4) : SI

Correct Option : 3 From : Lecture 3

Question # 35

SP is a memory pointer and is used indirectly by a set of _____.

- 1) : instructions
- 2) : Pointers
- 3) : Indexes
- 4) : Variables

Correct Option : 1 From : Lecture 3

Question # 36

_____ is also a memory pointer containing the address in a special area of memory called the stack.

- 1) : SP
- 2) : BP
- 3) : PB
- 4) : AC

Correct Option : 2 From : Lecture 3

Question # 37

_____ is bit wise significant and accordingly each bit is named separately.

- 1) : AX
- 2) : FS
- 3) : IP
- 4) : Flags Register

Correct Option : 4 From : Lecture 3

Question # 38

When two 16bit numbers are added the answer can be 17 bits long, this extra bit that won't fit in the target register is placed in the _____ where it can be used and tested

- 1) : carry flag
- 2) : Parity Flag
- 3) : Auxiliary Carry
- 4) : Zero Flag

Correct Option : 1 From : Lecture 3

Question # 39

Program is an ordered set of instructions for the processor.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 3

Question # 40

For Intel Architecture "operation destination, source" is way of writing things.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 3

Question # 41

Operation code " add ax, bx " _____.

- 1) : Add the bx to ax and change the bx
- 2) : Add the ax to bx and change the ax
- 3) : Add the bx to ax and change the ax
- 4) : Add the bx to ax and change nothing

Correct Option : 3 From : Lecture 3

Question # 42

The maximum memory iAPX88 can access is _____.

- 1) : 1MB
- 2) : 2MB
- 3) : 3MB
- 4) : 128MB

Correct Option : 1 From : Lecture 4

Question # 43

The maximum memory iAPX88 can access is 1MB which can be accessed with _____.

- 1) : 18 bits
- 2) : 20 bits
- 3) : 16 bits
- 4) : 2 bits

Correct Option : 2 From : Lecture 4

Question # 44

_____ address of 1DED0 where the opcode B80500 is placed.

- 1) : physical memory
- 2) : memory
- 3) : effective
- 4) : None of the Given

Correct Option : 1 From : Lecture 4

Question # 45

16 bit of Segment and Offset Addresses can be converted to 20bit Address i.e

Segment Address with lower four bits zero + Offset Address with _____

four bits zero = 20bit Physical Address

- 1) : Middle
- 2) : lower
- 3) : Top
- 4) : upper

Correct Option : 4 From : Lecture 4

Question # 46

When adding two 20bit Addresses a carry if generated is dropped without being stored anywhere and the phenomenon is called address_____.

- 1) : wraparound
- 2) : mode

3) : ping

4) : error

Correct Option : 1 From : Lecture 4

Question # 47

segments can only be defined a 16byte boundaries called _____ boundaries.

1) : segment

2) : paragraph

3) : Cell

4) : RAM

Correct Option : 1 From : Lecture 4

Question # 48

in a Program CS, DS, SS, and ES all had the same value in them. This is called _____.

1) : equal memory

2) : overlapping segments

3) : segments hiding

4) : overlapping SI

Correct Option : 2 From : Lecture 4

Question # 49

"db num1" size of the memory is _____

1) : 1byte

2) : 4bit

3) : 16bit

4) : 2byte

Correct Option : 1 From : Lecture 5

Question # 50

" 1-----[org 0x0100]

2-----mov ax, [num1] ; load first number in ax

3-----mov bx, [num2] ; load second number in bx

4-----add ax, bx _____

5-----int 0x21

6-----

7-----num1: dw 5

8-----num2: dw 10

Comments for the 4 are :

1) : No comments Will be

2) : ; accumulate sum in add

3) : ; accumulate sum in ax

4) : ; accumulate sum in Bx

Correct Option : 3 From : Lecture 5

Question # 51

In " mov ax, bx " is _____ Addressing Modes.

1) : Immediate

2) : Indirect

3) : Direct

4) : Register

Correct Option : 4 From : Lecture 5

Question # 52

In "mov ax, [bx]" is _____ Addressing Modes

- 1) : Based Register Indirect
- 2) : Indirect
- 3) : Base Indirect
- 4) : Immediate

Correct Option : 1 From : Lecture 5

Question # 53

In "mov ax, 5" is _____ Addressing Modes

- 1) : Immediate
- 2) : Indirect
- 3) : Indirect
- 4) : Register

Correct Option : 1 From : Lecture 6

Question # 54

In "mov ax, [num1+bx]" is _____ ADDRESSING

- 1) : OFFSET+ Indirect
- 2) : Register + Direct
- 3) : Indirect + Reference
- 4) : BASEd REGISTER + OFFSET

Correct Option : 4 From : Lecture 7

Question # 55

"base + offset addressing" gives This number which came as the result of addition is called the _____.

- 1) : Address
- 2) : mode
- 3) : effective address
- 4) : Physical Address

Correct Option : 3 From : Lecture 7

Question # 56

"mov ax, [cs:bx]" associates _____ for this one instruction

- 1) : CS with BX
- 2) : BX with CS
- 3) : BX with AX
- 4) : None of the Given

Correct Option : 2 From : Lecture 7

Question # 57

For example

BX=0100

DS=FFF0

And Opcode are;

move [bx+0x0100], Ax

now what is the effective memory address;

- 1) : 0020
- 2) : 0200
- 3) : 0300
- 4) : 0x02

Correct Option : 2 From : Lecture 7

Question # 58

For example

BX=0100

DS=FFF0

And Opcode are;

move [bx+0x0100], Ax

now what is the physical memory address;

1) : 0020

2) : 0x0100

3) : 0x10100

4) : 0x100100

Correct Option : 2 From : Lecture 7

Question # 59

In " mov [1234], al " is _____ Addressing Modes.

1) : Immediate

2) : Indirect

3) : Direct

4) : Register

Correct Option : 3 From : Lecture 8

Question # 60

In " mov [SI], AX " is _____ Addressing Modes.

1) : Base Register Indirect

2) : Indirect

3) : Indexed Register Indirect

4) : Immediate

Correct Option : 3 From : Lecture 8

Question # 61

In " mov ax, [bx - SI] " is _____ ADDRESSING

1) : Base Register Indirect

2) : Indirect

3) : Direct

4) : illegal

Correct Option : 4 From : Lecture 8

Question # 62

In " mov ax, [BL] " there is error i.e. _____

1) : Address must be 16bit

2) : Address must be 8bit

3) : Address must be 4bit

4) : 8 bit to 16 bit move illegal

Correct Option : 4 From : Lecture 8

Question # 63

In " mov ax, [SI+DI] " there is error i.e. _____

1) : Two indexes can't use as Memory Address

2) : index can't use as Memory Address

3) : I don't Know

4) : None of the Given

Correct Option : 1 From : Lecture 8

Question # 64

In JNE and JNZ there is difference for only _____;

- 1) : Programmer or Logic
- 2) : Assembler
- 3) : Debugger
- 4) : IAPX88

Correct Option : 1 From : Lecture 9

Question # 65

JMP is Instruction that on executing take jump regardless of the state of all flags is called _____

- 1) : Jump
- 2) : Conditional jump
- 3) : Unconditional jump
- 4) : Stay

Correct Option : 3 From : Lecture 9

Question # 66

When result of the source subtraction from the destination is zero, zero flag is set i.e. ZF=1

its mean that;

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : DEST < SRC
- 4) : DEST > SRC

Correct Option : 1 From : Lecture 9

Question # 67

When an unsigned source is subtracted from an unsigned destination and the destination is smaller, borrow is needed which sets the _____.

- 1) : carry flag i.e CF = 0
- 2) : carry flag i.e CF = 1
- 3) : Carry Flag + ZF=1
- 4) : None of the Given

Correct Option : 2 From : Lecture 9

Question # 68

In the case of unassigned source and destination when subtracting and in the result ZF =1 OR CR=1 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST ? USRC
- 4) : DEST > SRC

Correct Option : 3 From : Lecture 9

Question # 69

In the case of unassigned source and destination when subtracting and in the result ZF =0 AND CR=0 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST < USRC
- 4) : UDEST > USRC

Correct Option : 4 From : Lecture 9

Question # 70

In the case of unassigned source and destination when subtracting and in the result CR=0 then _____

- 1) : DEST = SRC

- 2) : DEST != SRC
- 3) : UDEST < USRC
- 4) : UDEST ? USRC

Correct Option : 4 From : Lecture 9

Question # 71

_____ This jump is taken if the last arithmetic operation produced a zero in its destination. After a CMP it is taken if both operands were equal.

- 1) : Jump if zero(JZ)/Jump if equal(JE)
- 2) : Jump if equal(JE)
- 3) : Jump if zero(JZ)
- 4) : No Jump fot This

Correct Option : 1 From : Lecture 9

Question # 72

_____ This jump is taken after a CMP if the unsigned source is smaller than or equal to the unsigned destination.

- 1) : JBE(Jump if not below or equal)
- 2) : JNA(Jump if not above)/JBE(Jump if not below or equal)
- 3) : JNA(Jump if not above)
- 4) : No Jump fot This

Correct Option : 2 From : Lecture 9

Question # 73

Numbers of any size can be added using a proper combination of _____.

- 1) : ADD and ADC
- 2) : ABD and ADC
- 3) : ADC and ADC
- 4) : None of the Given

Correct Option : 1 From : Lecture 11

Question # 74

Like addition with carry there is an instruction to subtract with borrows called _____.

- 1) : SwB
- 2) : SBB
- 3) : SBC
- 4) : SBBC

Correct Option : 2 From : Lecture 11

Question # 75

if "and ax, bx" instruction is given, There are _____ operations as a result

- 1) : 16 AND
- 2) : 17 AND
- 3) : 32 AND
- 4) : 8 AND

Correct Option : 1 From : Lecture 12

Question # 76

_____ can be used to check whether particular bits of a number are set or not.

- 1) : AND
- 2) : OR
- 3) : XOR
- 4) : NOT

Correct Option : 1 From : Lecture 12

Question # 77

_____ can also be used as a masking operation to invert selective bits.

- 1) : AND
- 2) : OR
- 3) : XOR
- 4) : NOT

Correct Option : 3 From : Lecture 12

Question # 78

Masking Operations are Selective Bit _____

- 1) : Clearing, XOR, Inversion and Testing
- 2) : Clearing, Setting, Inversion and Testing
- 3) : Clearing, XOR, AND and Testing
- 4) : None of the Given

Correct Option : 2 From : Lecture 12

Question # 79

The _____ instruction allows temporary diversion and therefore reusability of code.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 1 From : Lecture 13

Question # 80

CALL takes a label as _____ and execution starts from that label,

- 1) : argument
- 2) : Lable
- 3) : TXt
- 4) : Register

Correct Option : 1 From : Lecture 13

Question # 81

When the _____ instruction is encountered and it takes execution back to the instruction following the CALL.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 2 From : Lecture 13

Question # 82

_____ Both the instructions are commonly used as a pair, however technically they are independent in their operation.

- 1) : RET and ADC
- 2) : Cal and SSb
- 3) : CALL and RET
- 4) : ADC and SSB

Correct Option : 3 From : Lecture 13

Question # 83

The CALL mechanism breaks the thread of execution and does not change

registers, except _____.

- 1) : SI
- 2) : IP
- 3) : DI
- 4) : SP

Correct Option : 2 From : Lecture 13

Question # 84

Stack is a _____ that behaves in a first in last out manner.

- 1) : Program
- 2) : data structure
- 3) : Heap
- 4) : None of the Given

Correct Option : 2 From : Lecture 14

Question # 85

If _____ is not available, stack clearing by the callee is a complicated process.

- 1) : CALL
- 2) : SBB
- 3) : RET n
- 4) : None of the Given

Correct Option : 3 From : Lecture 14

Question # 86

When the stack will eventually become full, SP will reach 0, and thereafter wraparound producing unexpected results. This is called stack _____

- 1) : Overflow
- 2) : Leakage
- 3) : Error
- 4) : Pointer

Correct Option : 1 From : Lecture 14

Question # 87

The pop operation makes a copy from the top of the stack into its _____.

- 1) : Register
- 2) : operand
- 3) : RET n
- 4) : Pointer

Correct Option : 2 From : Lecture 14

Question # 88

_____ decrements SP (the stack pointer) by two and then transfers a word from the source operand to the top of stack

- 1) : PUSH
- 2) : POP
- 3) : CALL
- 4) : RET

Correct Option : 1 From : Lecture 14

Question # 89

POP transfers the word at the current top of stack (pointed to by SP) to the destination operand and then _____ SP by two to point to

the new top of stack.

- 1) : increments
- 2) : decrements
- 3) : ++
- 4) : --

Correct Option : 1 From : Lecture 14

Question # 90

The trick is to use the _____ and _____ operations and save the callers' value on the stack and recover it from there on return.

- 1) : POP, ADC
- 2) : CALL, RET
- 3) : CALL, RET n
- 4) : PUSH, POP

Correct Option : 4 From : Lecture 14

Question # 91

To access the arguments from the stack, the immediate idea that strikes is to _____ them off the stack.

- 1) : PUSH
- 2) : POP
- 3) : CALL
- 4) : Rregister

Correct Option : 2 From : Lecture 15

Question # 92

push bp

we are _____

- 1) : sending bp copy to stack
- 2) : making bp copy from stack
- 3) : pushing bp on the stack
- 4) : doing nothing

Correct Option : 3 From : Lecture 15

Question # 93

Local Variables means variables that are used within the _____

- 1) : Subroutine
- 2) : Program
- 3) : CALL
- 4) : Label

Correct Option : 1 From : Lecture 15

Question # 94

Standard ASCII has 128 characters with assigned numbers from _____.

- 1) : 1 to 129
- 2) : 0 to 127
- 3) : 0 to 128
- 4) : None of the Given

Correct Option : 2 From : Lecture 16

Question # 95

When _____ is sent to the VGA card, it will turn pixels on and off in such a way that a visual representation of 'A' appears on the screen.

- 1) : 0x60
- 2) : 0x90

3) : 0x30

4) : 0x40

Correct Option : 4 From : Lecture 16

Question # 96

Which bit is refer to the Blinking of foreground character

1) : 6

2) : 7

3) : 5

4) : 3

Correct Option : 2 From : Lecture 16

Question # 97

Which bit is refer to the Intensity component of foreground color

1) : 4

2) : 5

3) : 3

4) : 7

Correct Option : 3 From : Lecture 16

Question # 98

Which bit is refer to the Green component of background color

1) : 1

2) : 5

3) : 3

4) : 7

Correct Option : 2 From : Lecture 16

Question # 99

Which bit is refer to the Green component of foreground color

1) : 1

2) : 5

3) : 3

4) : 7

Correct Option : 1 From : Lecture 16

Question # 100

String can be indicate bye given

1) : db 0x61, 0x61, 0x63

2) : db 'a', 'b', 'c'

3) : db 'abc'

4) : All of the above

Correct Option : 4 From : Lecture 16

Question # 101

The first form divides a 32bit number in DX:AX by its 16bit operand and stores the _____ quotient in AX

1) : 16bit

2) : 17bit

3) : 32bit

4) : 64bit

Correct Option : 1 From : Lecture 17

Question # 102

The _____ (division) used in the process is integer division and

not floating point division.

- 1) : DIV instruction
- 2) : ADC instruction
- 3) : SSB instruction
- 4) : DIVI instruction

Correct Option : 1 From : Lecture 17

Question # 103

_____ (multiply) performs an unsigned multiplication of the source operand and the accumulator.

- 1) : Multi
- 2) : DIV
- 3) : MUL
- 4) : Move

Correct Option : 3 From : Lecture 18

Question # 104

The desired location on the screen can be calculated with the following formulae.

- 1) : $\text{location} = (\text{hypos} * 80 + \text{SP}) * 3$
- 2) : $\text{location} = (\text{hypos} * 80 + \text{slocation}) * 2$
- 3) : $\text{location} = (\text{hypos} * 80 + \text{epos}) * 2$
- 4) : None of the Given

Correct Option : 3 From : Lecture 18

Question # 105

To play with string there are 5 instructions that are _____

- 1) : STOS, LODS, CMPS, SCAS, and MOVS
- 2) : MUL, DIV, ADD, ADC and MOVE
- 3) : SSB, ADD, CMPS, ADC, and MOVS
- 4) : None of the Given

Correct Option : 1 From : Lecture 18

Question # 106

_____ transfers a byte or word from register AL or AX to the string element addressed by ES:DI and updates DI to point to the next location.

- 1) : LODS
- 2) : STOS
- 3) : SCAS
- 4) : MOVE

Correct Option : 2 From : Lecture 18

Question # 107

_____ transfers a byte or word from the source location DS:SI to AL or AX and updates SI to point to the next location.

- 1) : LODS
- 2) : STOS
- 3) : SCAS
- 4) : MOVE

Correct Option : 1 From : Lecture 18

Question # 108

_____ compares a source byte or word in register AL or AX with the destination string element addressed by ES: DI and updates the flags.

- 1) : LODS

- 2) : STOS
- 3) : SCAS
- 4) : MOVE

Correct Option : 3 From : Lecture 18

Question # 109

_____ repeat the following string instruction while the zero flag is set and REPNE or REPNZ repeat the following instruction while the zero flag is not set.

- 1) : REP or REPZ
- 2) : REPE or REPZ
- 3) : REPE or RPZ
- 4) : RPE or REPZ

Correct Option : 2 From : Lecture 18

Question # 110

LES loads _____

- 1) : ES
- 2) : DS
- 3) : PS
- 4) : LS

Correct Option : 1 From : Lecture 20

Question # 111

LDS loads_____.

- 1) : ES
- 2) : DS
- 3) : PS
- 4) : LS

Correct Option : 2 From : Lecture 20

Question # 112

REP allows the instruction to be repeated _____ times allowing blocks of memory to be copied.

- 1) : DX
- 2) : CX
- 3) : BX
- 4) : AX

Correct Option : 2 From : Lecture 20

Question # 113

_____pops IP, then CS, and then FLAGS.

- 1) : Ret n
- 2) : REZA
- 3) : REPE
- 4) : IRET

Correct Option : 4 From : Lecture 21

Question # 114

_____, Trap, Single step Interrupt

- 1) : INT 0
- 2) : INT 1
- 3) : INT 3
- 4) : INT 0

Correct Option : 2 From : Lecture 21

Question # 115

_____, NMI-Non Maskable Interrupt

- 1) : INT 0
- 2) : INT 1
- 3) : INT 3
- 4) : INT 0

Correct Option : 3 From : Lecture 21

Question # 116

To hook an interrupt we change the _____ corresponding to that interrupt.

- 1) : SX
- 2) : vector
- 3) : AX
- 4) : BX

Correct Option : 2 From : Lecture 22

Question # 117

_____ pops IP, then CS, and then FLAGS.

- 1) : Ret n
- 2) : REZA
- 3) : REPE
- 4) : IRET

Correct Option : 4 From : Lecture 21

Question #118

_____, Trap, Single step Interrupt

- 1) : INT 0
- 2) : INT 1
- 3) : INT 3
- 4) : INT 0

Correct Option : 2 From : Lecture 21

Question #119

_____, NMI-Non Maskable Interrupt

- 1) : INT 0
- 2) : INT 1
- 3) : INT 3
- 4) : INT 0

Correct Option : 3 From : Lecture 21

Question # 120

To hook an interrupt we change the _____ corresponding to that interrupt.

- 1) : SX
- 2) : vector
- 3) : AX
- 4) : BX

1. Assembly language is not a low level language.

a. True

b. False

2. In case of COM File first command parameter is stored at _____ offset of program segment prefix.

a. 0x80 (Not Confirm)

b. 0x82

c. 0x84

d. 0x86

3. Address always goes from

a. Processor to memory

b. Memory to processor

c. Memory to memory

d. None of the above

4. The source register in OUT is

a. AL or AX

b. BL or BX

c. CL or CX

d. DL or DX

5. By default CS is associated with

a. SS

b. BP

c. CX

d. IP

6. Which of the following pins of parallel port are grounded

a. 10-18

b. 18-25

c. 25-32

d. 32-39

7. In the instruction mov word [es:160], 0x1230, 30 represents the character

a. A

b. B

c. 0

d. 1

8. On executing 0x21 0x3D, if file can't be opened then

a. CF will contain 1

b. CF will contain 0

c. ZF will contain 1

d. ZF will contain 0

9. Which of the following IRQ is cascading interrupt

a. IRQ 0

b. IRQ 1

c. IRQ 2

d. IRQ 3

10. The execution of instruction mov word [es:160], 0x1230, will print a character on the screen at

a. First column of second row

- b. Second column of first row
- c. Second column of second row
- d. First column of third row**

=====

- 1)))SHR and SAL are same?
 - .True (correct)
 - .False
- 2)))mov ax,0 will set ZF flag
 - .True
 - .False
- 3)))In 9 pin DB connector ,which pic is assigned to TD.
 - . 1
 - . 2
 - . 3(correct)
 - . 4
- 4)))Lower 16 bits of EAX are labeled as
 - . AX(correct)
 - . BX
 - .EAX
 - .none of above
- 5))) which is the special prefix used for repeating a block
 - .rep(correct)
 - .repeat
 - .repb
 - .repe
- 6)) JA can not after cmp if unsigned destination is greater than source
 - .true
 - .false

Q=1

Conditional jump can only:

- 1. Far
- 2. short
- 3. near
- 4. all of the given

q=2:

Address is always go from:

- 1. Processor to memory
- 2. Memory to processor
- 3. Memory to memory
- 4. None of given

Q=3;

Programmable interrupt controllers have two ports 20 and 21.....port 20 is a control port while port 21 is

.....

1. The interrupt make register
2. Interrupt port
3. Output port
4. Input port

Q=4:

In the instruction "move word[es:160],0x1230 represent the charechter.....

1. A
2. B
3. 0
4. 1

Q=5:

The 8088 processor divides interrupts into how many classes?

1. 2
2. 3
3. 4
4. 5

Q=6:

Which of the following is the pair of register used to access memory in string instruction?

1. DI and BP
2. SI and BP
3. DI and SI
4. DS and SI

Q=7:

In case of COM file,first command line parameter is stored at offset of program segment prefix'

1. 0x80
2. 0x82
3. 0x84
4. 0x86

Q=8:

The INT 0x13 service 0x03 is use to ...

1. Read disk sector
2. Write disk sector
3. Reset disk sector
4. Get drive parameters

Q=9:

After the execution of STOSWB,the CX will be.....

1. Incremented by 1
2. Incremented by 2
3. Decrementd by 1
4. Decrementd by 2

Q=10

The execution of the instruction "mov word [ES:160],0x1230"will print a character on the screen at:

1. First column of second row
2. Second column of first row
3. Second column of second row
4. First column of third row

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Marks: 38

[illegible]

Question No: 1 (Marks: 1) - Please choose one

After the execution of SAR instruction

▶ **The msb is replaced by a 0**

- ▶ The msb is replaced by 1
- ▶ The msb retains its original value
- ▶ The msb is replaced by the value of CF

Question No: 2 (Marks: 1) - Please choose one

RETF will pop the offset in the

- ▶ BP
- ▶ **IP**
- ▶ SP
- ▶ SI

Question No: 3 (Marks: 1) - Please choose one

The routine that executes in response to an INT instruction is called

▶ **ISR**

- ▶ IRS
- ▶ ISP
- ▶ IRT

Question No: 4 (Marks: 1) - Please choose one

The first instruction of "COM" file must be at offset:

- ▶ 0x0010
- ▶ **0x0100**
- ▶ 0x1000
- ▶ 0x0000

Question No: 5 (Marks: 1) - Please choose one

"Far" jump is not position relative but is _____

- ▶ memory dependent
- ▶ **Absolute**
- ▶ temporary
- ▶ indirect

Question No: 6 (Marks: 1) - Please choose one

Only _____ instructions allow moving data from memory to memory.

► **string**

- word
- indirect
- stack

Question No: 7 (Marks: 1) - Please choose one

After the execution of instruction “RET 2”

► **SP is incremented by 2**

- SP is decremented by 2
- SP is incremented by 4
- SP is decremented by 4

Question No: 8 (Marks: 1) - Please choose one

DIV instruction has

► **Two forms**

- Three forms
- Four forms
- Five forms

Question No: 9 (Marks: 1) - Please choose one

When the operand of DIV instruction is of 16 bits then implied dividend will be of

- 8 bits
- 16 bits
- **32 bits**
- 64 bits

Question No: 10 (Marks: 1) - Please choose one

After the execution of MOVS instruction which of the following registers are updated

▶ SI only

▶ DI only

▶ SI and DI only

▶ SI, DI and BP only

Question No: 11 (Marks: 1) - Please choose one

In 8088 architecture, whenever an element is pushed on the stack

▶ SP is decremented by 1

▶ SP is decremented by 2

▶ SP is decremented by 3

▶ SP is decremented by 4

Question No: 12 (Marks: 1) - Please choose one

When a very large number is divided by very small number so that the quotient is larger than the space provided, this is called

▶ Divide logical error

▶ Divide overflow error

▶ Divide syntax error

▶ An illegal instruction

Question No: 13 (Marks: 1) - Please choose one

In the word designated for one screen location, the higher address contains

▶ The character code

▶ The attribute byte

▶ The parameters

▶ The dimensions

Question No: 14 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

▶ mov AX, 0xb008

mov ES, AX

▶ mov AX, 0xb800

mov ES, AX

▶ mov AX, 0x8b00

```
mov ES, AX
    ► mov AX, 0x800b
mov ES, AX
```

Question No: 15 (Marks: 1) - Please choose one

In a video memory, each screen location corresponds to

- One byte
- **Two bytes**
- Four bytes
- Eight bytes

Question No: 16 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES : 0], 0x0741” will print character “A” on screen , background color of the screen will be

► **Black**

- White
- Red
- Blue

Question No: 17 (Marks: 2)

Why is it necessary to provide the segment and offset address in case of FAR jump ?

Segment and offset must be given to a far jump. Because, sometimes we may need to go from one code segment to another, and near and short jumps cannot take us there. Far jump must be used and a two byte segment and a two byte offset are given to it. It loads CS with the segment part and IP with the offset part.

Question No: 18 (Marks: 2)

What's your understanding about Incrementing and Decrementing Stack?

Whenever an element is pushed on the stack SP is decremented by two and whenever an element is popped on the stack SP is incremented by two.

A decrementing stack moves from higher addresses to lower addresses as elements are added in it while an incrementing stack moves from lower addresses to higher addresses as elements are added.

As the 8088 stack works on word sized elements. Single bytes cannot be pushed or popped from the stack.

Question No: 19 (Marks: 2)

Number2:

IF DF=0 what its represent and IF DF=1 what its represent ?

The direction of movement is controlled with the Direction Flag (DF) in the flags register. If this flag is cleared DF=0, the direction is from lower addresses towards higher addresses and if this flag is set DF=1, the direction is from higher addresses to lower addresses. If DF is cleared, DF = 0 this is called the autoincrement mode of string instruction, and if DF is set, DF=1, this is called the autodecrement mode. There are two instructions to set and clear the direction flag.

Question No: 20 (Marks: 3)

What is the Difference between CALL and RET

The CALL instruction allows temporary diversion and therefore reusability of code.

The word return holds in its meaning that we are to return from where we came and need no explicit destination.

Therefore RET takes no arguments and transfers control back to the instruction following the CALL that took us in this subroutine.

Question No: 21 (Marks: 3)

Tell the Formula to scroll up the screen

rep movsw

scroll up

```
scrollup: push bp
mov bp, sp
push ax
push cx
push si
push di
push es
push ds
mov ax, 80 ; load chars per row in ax
mul byte [bp+4] ; calculate source position
mov si, ax ; load source position in si
push si ; save position for later use
shl si, 1 ; convert to byte offset
mov cx, 2000 ; number of screen locations
sub cx, ax ; count of words to move
mov ax, 0xb800
mov es, ax ; point es to video base
mov ds, ax ; point ds to video base
xor di, di ; point di to top left column
cld ; set auto increment mode
rep movsw ; scroll up
```

```

mov ax, 0x0720          ; space in normal attribute
pop cx                  ; count of positions to clear
rep stosw               ; clear the scrolled space
pop ds
pop es
pop di
pop si
pop cx
pop ax
pop bp
ret 2

```

Question No: 22 (Marks: 5)

Explain how extended shifting is performed

Using our basic shifting and rotation instructions we can effectively shift a 32bit number in memory word by word. We cannot shift the whole number at once since our architecture is limited to word operations. The algorithm we use consists of just two instructions and we name it extended shifting.

```

num1: dd 40000
shl word [num1], 1
rcl word [num1+2], 1

```

The DD directive reserves a 32bit space in memory; however the value we placed there will fit in 16bits. So we can safely shift the number left 16 times.

The least significant word is accessible at num1 and the most significant word is accessible at num1+2.

The two instructions are carefully crafted such that the first one shifts the lower word towards the left and the most significant bit of that word is dropped in carry. With the next instruction we push that dropped bit into the least significant bit of the next word effectively joining the two 16bit words.

The final carry after the second instruction will be the most significant bit of the higher word, which for this number will always be zero.

Question No: 23 (Marks: 5)

Write a subroutine to calculate the string length.?

```

subroutine to calculate the length of a string
; takes the segment and offset of a string as parameters
strlen: push bp
mov bp,sp
push es
push cx

```

push di	
les di, [bp+4]	; point es:di to string
mov cx, 0xffff	; load maximum number in cx
xor al, al	; load a zero in al
repne scasb	; find zero in the string
mov ax, 0xffff	; load maximum number in ax
sub ax, cx	; find change in cx
dec ax	; exclude null from length
pop di	
pop cx	
pop es	
pop bp	
ret 4	

absolute address :

A virtual (not physical) address within the process' address space that is computed as an absolute number.

Address Bus : The group of bits that the processor uses to inform the memory about which element to read or write is collectively known as the address bus. The address bus is unidirectional and address always travels from processor to memory.

Address

wraparound :

In physical address calculation a carry if generated is dropped without being stored anywhere, for example BX=0100, DS=FFF0 and the access under consideration is [bx+0x0100]. The effective address will be 0200 and the physical address will be 100100. This is a 21bit answer and cannot be sent on the address bus which is 20 bits wide. The carry is dropped and just like the segment wraparound our physical memory has wrapped around at its very top.

AND

operation :

AND performs the logical bitwise and of the two operands (byte or word) and returns the result to the destination operand. A bit in the result is set if both corresponding bits of the original operands are set; otherwise the bit is cleared.

Archive bit : Used to indicate the most recently modified version of a file.

assembler : A program that translates assembly language into machine language.

Base + Index +

Offset

Addressing :

The values of the base register, the index register, and the constant offset are all added together to get the effective address. For example "mov [bx+si+300], ax" moves the word contents of the AX register to the word in memory starting at offset attained by adding BX, SI, and 300 in the current data segment. Default segment association is again based on the base register.

Base + Index

Addressing :

The value of the base register and the index register are added together to get the effective address. For example "mov [bx+si], ax" moves the word contained in the AX register to offset attained by adding BX and SI in the current data segment.

Based Register

Indirect +

Offset

Addressing :

A base register is used with a constant offset in this addressing mode. The value contained in the base register is added with the constant offset to get the effective address. For example "mov [bx+300], ax" stores the word contained in AX at the offset attained by adding 300 to BX in the current data segment.

Based Register

Indirect

Addressing :

A base register is used in brackets and the actual address accessed depends on the value contained in that register.

Binary : A binary number is expressed in the base two. Its possible value is either 0 or 1.

Binary coded

decimal(BCD):

A system of coding in which each decimal digit is as 4 binary digits.

Byte : A byte is a unit of 8 bits

CALL : An assembly language instruction telling the assembler to perform the subroutine.

Carry flag : The bit in the flag register that indicates whether the previous operation resulted in a carry out of or borrow into high order bit of the resulting byte or word.

Cell width : The number of bits in a memory cell is called the cell width.

Command : Command is an instruction to a computer or device to perform a specific task

Compare Instruction : The operation of CMP is to subtract the source operand from the destination operand, updating the flags without changing either the source or the destination.

Data Bus : Data bus is used to move data from the memory to the processor in a read operation and from the processor to the memory in a write operation.

Data Transfer Area : Area of memory that DOS uses to store data from a file.

Debugger : A utility program that allows the programmer to execute a program one line at a time and view the contents of registers and memory in order to help locate the source of bugs or other problems.

Examples are CodeView.

Declaration : A construct that associates the name and the attributes of a variable, function, or type.

Default : A setting or value that is assumed unless specified otherwise.

Direct addressing : A fixed offset is given in brackets and the memory at that offset is accessed.

Directory : A logical grouping of files and disks for the purpose of organizing files in memory or on disks. Each

High-level programming:

Programming that does not need to consider, aspects of the underlying hardware and operating system

Indexed

Register

Indirect +

Offset

Addressing : An index register is used with a constant offset in this addressing mode. The value contained in the index register is added with the constant offset to get the effective address. For example “mov [si+300], ax” moves the word contained in AX to the offset attained by adding 300 to SI in the current data segment

Indexed

Register

Indirect

Addressing :

An index register is used in brackets and the actual address accessed depends on the value contained in that register. For example “mov [si], ax” moves the contents of the AX register to the word starting at address contained in SI in the current data segment.

Instruction : A command that tells the processor to do something, like add two numbers or get some data from the memory.

Interrupt : An interrupt is a request for service from an external device seeking attention. The external device requests service by asserting an interrupt request line connected to the processor. The processor may or may not deal with the interrupt depending on whether the interrupt is masked (i.e., ignored). If the interrupt is not masked, the processor deals with it by executing a piece of code called an interrupt handler. Once this handler has been executed, the processor returns to the point that it had reached immediately before the interrupt

Interrupt flag:

The bit in the flag register that indicates whether the CPU should handle mask able interrupts. If this flag is set, interrupt are handled. If it is clear, interrupts are ignored.

Linear memory model:

In linear memory model the whole memory appears like a single array of data. 8080 and 8085 could access a total memory of 64K using the 16 lines of their address bus.

Listing File : Listing file is an optional output file from the assembly process that shows how the assembly. language program has been translated into object code. A listing file has the extension .LST.

Local variable:

A variable whose scope is confined to a particular unit of code, such as module-level code, or a procedure.

Logical Address :

The address of an operand generated by the CPU is called a logical address. The logical address is mapped onto the actual address (physical address) of an operand by a memory management unit.

Low-level programming:

Programming that uses direct access to machine-level features such as programs that are part of a machine's control systems

Machine language :

The series of binary digits a microprocessor executes to perform individual tasks. People program in assembly language, and an assembler translates their instructions into machine language.

Memory : Memory is where data is stored. One byte allows you to store an eight digit binary number, so the largest number you can store in each location is a binary 11111111, or 255 in decimal. The lowest is 0. If we want to use larger numbers, we group several chunks together. One common grouping is two bytes, or a "word". Two bytes together can hold a value between 0 and 65535 (2^{16}).

memory stack: A contiguous array of memory locations, commonly referred to as “the stack”, used in many processors to save the state of the calling procedure, pass parameters to the called procedure and store local variables for the currently executing procedure.

Mnemonic : A word, abbreviation, or acronym that replaces something too complex to remember or type easily. For example, ADC is the mnemonic for the 8086's add-with-carry instruction. The assembler converts it into machine (binary) code, so it is not necessary to remember or calculate the binary form.

Near Jump : When the relative address stored with the instruction is in 16 bits the jump is called a near jump. Using a near jump we can jump anywhere within a segment. If we add a large number it will wrap around to the lower part.

NEAR Procedure :

A procedure that can only be called by another procedure residing in the same segment.

NOT operation :

NOT inverts the bits (forms the one's complement) of the byte or word operand.

Offset : A distance from a given paragraph boundary in memory. The offset usually is given as a number of bytes.

Op code : The op code or operation code is the binary pattern that represents an instruction.

Transferring the address of an argument to a procedure. This allows the procedure to modify the argument's value

Passing by value :Transferring the value (rather than the address) of an argument to a procedure. This prevents the procedure from changing the argument's original value.

Peripheral : The term peripheral is somewhat ambiguous. It is used to describe external devices like disk drives, keyboards, mouse, and displays. It is also used to describe the hardware that interfaces these devices to the processor. For example, both the floppy disk controller chip that interfaces a floppy disk drive to a processor and the floppy disk drive itself are often called peripherals.

PROC : An assembly language directive indicating start of procedure.

Procedure call: An expression that invokes a procedure and passes actual arguments (if any) to the procedure.

Procedure definition :

A definition that specifies a procedure's name, its formal parameters, the declarations and statements that define what it does, and (optionally) its return type and storage class.

Procedure prototype :

A procedure declaration that includes a list of the names and types of formal parameters following the procedure name

Process : Generally, any executing program or code unit

Program : An organized list of instructions, that when executed causes the computer to work in a predetermined manner

Program Counter :

The program counter contains the address of the next instruction to be executed. The program counter is incremented after each instruction is executed.

Prompt : A message displayed at the beginning of a line by a program to request a response from the user. DOS prompts for commands with the current disk drive and directory name followed by an angle bracket (e.g., C:\Assembly).

Registers : A register is a piece of high-speed memory located directly on the processor. It is used to store data while the processor manipulates it. On the iAPX8088, there are 14 registers.

RET : At the end of the subroutine, a RET instruction pops the old value of IP from the stack into the instruction pointer, and execution resumes right where the CALL instruction left off.

Routine : A generic name for the procedure or a function

Segment : A particular area of memory of 64 K in size.

Segment Override Prefix : To override the association for one instruction of one of the registers BX, BP, SI or DI, we use the

segment override prefix. For example "mov ax, [cs:bx]" associates BX with CS for this one instruction. The processor places a special byte before the instruction called a prefix. No prefix is needed or placed for default association. Opcode has not changed, but the prefix byte has modified the default association to association with the desired segment register for this one instruction

Segment

wraparound :

Segment wraparound occurs when during the effective address calculation a carry is generated. This carry is dropped giving the effect that when we try to access beyond the segment limit, we are actually wrapped around to the first cell in the segment. For example if BX=9100, DS=1500 and the access is [bx+0x7000] we form the effective address $9100 + 7000 = 10100$. The carry generated is dropped forming the actual effective address of 0100.

Segmented memory model:

The segmented memory model allows multiple functional windows into the main memory, a code window, a data window etc. The processor sees code from the code window and data from the data window. The size of one window is restricted to 64K. However the maximum memory iAPX88 can access is 1MB which can be accessed with 20 bits.

Shift : A shift operation moves the bits of a memory location or a data register one or more places left or right. There are three types of shift (logical, arithmetic, and rotate). In a logical shift, a zero enters the bit at the end that is vacated. In an arithmetic operation, the sign bit is replicated during a shift right. In a rotate operation, the bit that falls off one end is copied to the vacated bit.

Short Jump : The jump in which if the offset is stored in a single byte then it is called a short jump. Conditional jumps can only be short. A short jump can go +127 bytes ahead in code and -128 bytes backwards and no more.

Signed integer: An integer value that uses the most-significant bit to represent the value's sign. If the bit is one, the number is negative; if zero, the number is positive.

Source File : A file which contains a program written in assembly language is the source file. It is an input to the assembler. An assembly language source file usually has the extension .ASM.

Stack : An area of memory in which data items are consecutively stored and removed on a last in, first out basis. A stack can be used to pass parameters to procedures.

Subroutine : A self-contained coding segment designed to do a specific task, sometimes referred to as

XOR operation : Exclusive OR performs the logical bitwise “exclusive or” of the two operands and returns the result to the destination operand. A bit in the result is set if the corresponding bits of the original operands contain opposite values (one is set, the other is cleared) otherwise the result bit is cleared.

Question: What is Computer Architecture

Answer: *Computer Architecture* is the science and art of selecting and interconnecting hardware components to create computers that meet functional, performance and cost goals. Computer architecture is *not* about using computers to design buildings. OR The set of layers and protocols (including formats and standards that different hardware/software must comply with to achieve stated objectives) which define a computer system. Computer architecture features can be available to application programs and system programmers in several modes, including a protected mode. For example, the system-level features of computer architecture may include: (1) memory management, (2) protection, (3) multitasking, (4) input/output, (5) exceptions and multiprocessing, (6) initialization, (7) co processing and multiprocessing, (8) debugging, and (9) cache management

Question: Explain Segment Override prefix?

Answer: To override the association for one instruction of one of the registers BX, BP, SI or DI, we use the segment override prefix. For example “mov ax, [cs:bx]” associates BX with CS for this one instruction. The processor places a special byte before the instruction called a prefix. No prefix is needed or placed for default association. Opcode has not changed, but the prefix byte has modified the default association to association with the desired segment register for this one instruction

Question: What is offset?

Answer: A distance from a given paragraph boundary in memory. The offset usually is given as a number of bytes

Question: What is Subroutine?

Answer: A self-contained coding segment designed to do a specific task, sometimes referred to as procedure

Question: Explain Segmented memory model?

Answer: The segmented memory model allows multiple functional windows into the main memory, a code window, a data window etc. The processor sees code from the code window and data from the data window. The size of one window is restricted to 64K. However the maximum memory iAPX88 can access is 1MB which can be accessed with 20 bits.

Question: What is Address wraparound?

Answer: In physical address calculation a carry if generated is dropped without being stored anywhere, for example BX=0100, DS=FFF0 and the access under consideration is [bx+0x0100]. The effective address will be 0200 and the physical address will be 100100. This is a 21bit answer and cannot be sent on the address bus which is 20 bits wide. The carry is dropped and just like the segment wraparound our physical memory has wrapped around at its very top.

Question: Explain Linear memory model?

Answer: In linear memory model the whole memory appears like a single array of data. 8080 and 8085 could access a total memory of 64K using the 16 lines of their address bus.

Question: What's the difference between .COM and .EXE formats?

Answer: To oversimplify: a .COM file is a direct image of how the program will look in main memory, and a .EXE file will undergo

some further relocation when it is run (and so it begins with a relocation header). A

.COM file is limited to 64K for all segments combined, but a .EXE file can have as many segments as your linker will handle and be as large as RAM can take. The actual file extension doesn't matter. DOS knows that a file being loaded is in .EXE format if its first two bytes are MZ or ZM; otherwise it is assumed to be in .COM format. Actually they must be less than 0xFFFF bytes long, since the PSP, which isn't included in the COM file but is within those 64K, is 256 bytes long. Then CAN use many segments, but they don't have to. In particular, any .COM file can be converted to an .EXE file by adding an appropriate header to it. There are some other differences between a .COM file and a single segment .EXE file (both of which must be smaller than 64K). The entry point of the .COM file is always 0x100, while the entry point of the .EXE file can be at any address. The stack size of the .COM file is the remainder of those 64K which isn't used by the code image, while the stack size if the single segment .EXE file can be set at any size as long as it fits within those 64K. Thus the stack can be smaller in the .EXE file.

Question: Is MS-DOS Dead?

Answer: No. Though Microsoft may not be actively developing MS-DOS there are still many omputers that are not capable of running Microsoft Windows. The current versions of Microsoft Windows will also run most MS-DOS programs; therefore, MS-DOS is not dead, and will most- likely never die just as Commodore-64s and Amigas have not completely died. Indeed, DOS has found a new life in embedded systems. Other parties continue to develop MS-DOS compatible operating systems. Windows NT, 2000, and XP all have a "Command Prompt" which is similar to the original MS-DOS command prompt.

Question: How can I read a character without echoing it to the screen, and without waiting for the user to press the Enter key?

Answer: In Assembly language, execute INT 21 AH=8; AL is returned with the character from standard input (possibly redirected). If you don't want to allow redirection, or you want to capture Ctrl-C and other special bytes, use INT 16 AH=10; this will return the scan code in AH and ASCII code (if possible) in AL, but AL=EO

Question: What is Term CACHE?

Answer: Cache A small fast memory holding recently accessed data, designed to speed up subsequent access to the same data. Most often applied to processor-memory access but also used for a local copy of data accessible over a network etc. When data is read from, or written to, main memory a copy is also saved in the cache, along with the associated main memory address. The cache monitors addresses of subsequent reads to see if the required data is already in the cache. If it is (a cache hit) then it is returned immediately and the main memory read is aborted (or not started). If the data is not cached (a cache miss) then it is fetched from main memory and also saved in the cache. The cache is built from faster memory chips than main memory so a cache hit takes much less time to complete than a normal memory access. The cache may be located on the same integrated circuit as the CPU, in order to further reduce the access time. In this case it is often known as {primary cache} since there may be a larger, slower secondary cache outside the CPU chip. The most important characteristic of a cache is its hit rate - the fraction of all memory accesses which are satisfied from the cache. This in turn depends on the cache design but mostly on its size relative to the main memory. The size is limited by the cost of fast memory chips. The hit rate also depends on the access pattern of the particular program being run (the sequence of addresses being read and written). Caches rely on two properties of the access patterns of most programs: temporal locality - if something is accessed once, it is likely to be accessed again soon, and spatial locality - if one memory location is accessed then nearby memory locations are also likely to be accessed. In order to exploit spatial locality, caches often operate on several words at a time, a "cache line" or "cache block". Main memory reads and writes are whole cache lines. When the processor wants to write to main memory, the data is first written to the cache on the assumption that the processor will probably read it again soon. Various different policies are used. In a write-through cache, data is written to main memory at the same time as it is cached. In a write-back cache it is only written to main memory when it is forced out of the cache. If all accesses were writes then, with a write-through policy, every write to the cache would necessitate a main memory write, thus slowing the system down to main memory speed. However, statistically, most accesses are reads and most of these will be satisfied from the cache. Write-through is simpler than write-back because an entry that is to be replaced can just be overwritten in the cache as it will already have been copied to main memory whereas write-back requires the cache to initiate a main memory write of the flushed entry followed (for a processor read) by a main memory read. However, write-back is more efficient because an entry may be written many times in the cache without a main memory access.

Question: What is difference b/w assembler and disassembler?

Answer: Assembler An assembler is a program that takes basic computer instructions and converts them into a pattern of bits that the computer's processor can use to perform its basic operations. Some people call these instructions assembler language and others use the term assembly language. In programming terminology, to disassemble is to convert a program in its executable (ready-to-run) form (sometimes called object code) into a representation in some form of assembler language so that it is readable by a human. A program used to accomplish this is called a disassembler, because it performs the inverse of the task that an assembler does. Disassembly is a type of reverse engineering. Another such program, called a decompiler, converts object code back into the code of a higher-level language.

Question: What are the functions of Parity and Sign flag?

Answer: Parity Parity is the number of "one" bits in a binary number. Parity is either odd or even. This information is normally used in communications to verify the integrity of data sent from the sender to the receiver. S Sign Flag A signed number is represented in its two's complement form in the computer. The most significant bit (MSB) of a negative number in this representation is 1 and for a positive number it is zero. The sign bit of the last mathematical or logical operation's destination is copied into the sign flag.

Question: WHAT IS MACHINE LANGUAGE?

Answer: Although programmers tend to use C or C++ or Pascal these days, the language closest to the PC hardware is machine language. Not one second during a PCS powered on lifetime passes where the computer is not executing machine language.

Question: WHEN TO USE ASSEMBLY LANGUAGE

Answer: I personally think that except as a learning exercise it is a waste of time writing something in ASM that can be written acceptably fast in a high-level language. Assembly language fits for the following: * Low level control. When you need to change the flags, or the control registers of the processor, as when entering protected mode. * Speed. Programs written in machine language execute fast! It can execute 10-100 times the speed of BASIC, and about twice as fast as a program written in C or Pascal. * Time Critical Code. Critical sections of programs written in higher level languages can be written in assembly to speed up sections. * Small program size. When you write a TSR for example this is very useful. Writing interrupt handlers is where assembly language shines. Assembly language is very flexible and powerful; anything that the hardware of the computer is capable of doing can be done in assembly.

Question: What are interrupts?

Answer: The hardware and software designed for original PC communicated with the CPU by means of a hierarchical and predetermined set of signals called interrupts. When a device or a program needed some action on the part of the CPU it would signal this by sending an interrupt signal. The CPU would sort out the priority of the incoming interrupt requests, with lower number interrupts being handled first (it is common for the CPU to be handling several interrupts concurrently) and then locate the code associated with the interrupt (the Interrupt Request Handler) by traversing the Interrupt Vector Table. Each interrupt (starting with

Answer: One of a small number of high-speed memory locations in a computer's CPU. Registers differ from ordinary random access memory in several respects: There are only a small number of registers (the "register set"), typically 32 in a modern processor though some, e.g. SPARC, have as many as 144. A register may be directly addressed with a few bits. In contrast, there are usually millions of words of main memory (RAM), requiring at least twenty bits to specify a memory location. Main memory locations are often specified indirectly, using an {indirect addressing} mode where the actual memory address is held in a register. Registers are fast; typically, two registers can be read and a third written -- all in a single cycle. Memory is slower; a single access can require several cycles.

Question: What is control bus and what function it performs?

Answer: The physical connections that carry control information between the CPU and other devices within the computer. Whereas the data bus carries actual data that is being processed, the control bus carries signals that report the status of various devices. For example, one line of the bus is used to indicate whether the CPU is currently reading from or writing to main memory.

Question: What do you mean by Peripheral devices?

Answer: Peripherals Any piece of hardware connected to a computer; any part of the computer outside the CPU and working memory; Any input or output device connected to a computer. Some examples of peripherals are keyboards, mice, monitors, printers, scanners, disk and tape drives, microphones, speakers, joysticks, plotters, and cameras.

Question: What is difference b/w physical and logical address?

Answer: The segment, offset pair is called a logical address, while the 20bit address is a physical address which is the real thing. Logical addressing is a mechanism to access the physical memory. However I recommend you to read topic 1.8 Segmented memory Model in handouts to get you understand well.

Question: What is difference between DATA LABEL and CODE LABEL?

Answer: Data Label is the label that we use to define data as we defined memory locations num1,num2 etc in our programs. Code Label is the label that we have on code as we see in case of conditional jump (Label 11) and is normally used for loop control statements.

Question: What is Segment Wrap Around?

Answer: For the whole megabyte we need 20 bits while CS and IP are both 16bit registers. We need a mechanism to make a 20bit number out of the two 16bit numbers. Consider that the segment value is stored as a 20 bit number with the lower four bits zero and the offset value is stored as another 20 bit number with the upper four bits zeroed. The two are added to produce a 20bit absolute address. A carry if generated is dropped without being stored anywhere and the phenomenon is called address **wraparound**.

Question: What is BIOS and how it can be updated?

Answer: One of the most common uses of Flash memory is for the basic input/output system of your computer, commonly known as the BIOS (pronounced "bye-ose"). On virtually every computer available, the BIOS makes sure all the other chips, hard drives, ports and CPU function together.

What BIOS Does?

The BIOS software has a number of different roles, but its most important role is to load the operating system. When you turn on your computer and the microprocessor tries to execute its first instruction, it has to get that instruction from somewhere. It cannot get it from the operating system because the operating system is located on a hard disk, and the microprocessor cannot get to it without some instructions that tell it how. The BIOS provides those instructions. Some of the other common tasks that the BIOS performs include: A power-on self-test (POST) for all of the different hardware components in the system to make sure everything is working properly Activating other BIOS chips on different cards installed in the computer – For example, SCSI and graphics cards often have their own BIOS chips. Providing a set of low-level routines that the operating system uses to interface to different hardware devices - It is these routines that give the BIOS its name. They manage things like the keyboard, the screen, and the serial and parallel ports, especially when the computer is booting. Managing a collection of settings for the hard disks, clock, etc. The BIOS is special software that interfaces the major hardware components of your computer with the operating system. It is usually stored on a Flash memory chip on the motherboard, but sometimes the chip is another type of ROM. When you turn on your computer, the BIOS does several things. This is its usual sequence:

1. Check the CMOS Setup for custom settings
2. Load the interrupt handlers and device drivers
3. Initialize registers and power management
4. Perform the power-on self-test (POST)
5. Display system settings
6. Determine which devices are bootable
7. Initiate the bootstrap sequence

Updating BIOS

Occasionally, a computer will need to have its BIOS updated. This is especially true of older machines. As new devices and standards arise, the BIOS needs to change in order to understand the new hardware. Since the BIOS is stored in some form of ROM, changing it is a bit harder than upgrading most other types of software. To change the BIOS itself, you'll probably need a special program from the computer or BIOS manufacturer. Look at the BIOS revision and date information displayed on system startup or check with your computer manufacturer to find out what type of BIOS you have. Then go to the BIOS manufacturer's Web site to see if

rule of putting the more significant part (segment) at a higher address is seen here as well. Mathematically offset of the interrupt n will be at $nx4$ while the segment will be at $nx4+2$. One entry in this table is called a vector. If the vector is changed for interrupt 0 then INT 0 will take execution to the new handler whose address is now placed at those four bytes. INT 1 vector occupies location 4, 5, 6, and 7 and similarly vector for INT 2 occupies locations 8, 9, 10, and 11. As the table is located in RAM it can be changed anytime. Immediately after changing it the interrupt mapping is changed and now the interrupt will result in execution of the new routine. This indirection gives the mechanism extreme flexibility.

Question: What are the terms ASCII CODE and SCAN CODE?

Answer: **Scan Code** Each key on the keyboard is assigned a unique number called a Scan Code; When a key is pressed, the keyboard circuit sends the corresponding scan code to the computer. Scan code table is given on MDB of Lecture#24.

ASCII Code

I/O devices such as the video monitor and printer are character oriented, and programs such as word processors deal with characters exclusively. Like all data, characters must be coded in binary in order to be processed by the computer. The most popular encoding scheme for characters is ASCII (American Standard Code for Information Interchange) code.

Question: What is Virtual Machine?

Answer: **Virtual machine** is a term used by Sun Microsystems, developers of the Java programming language and runtime environment, to describe software that acts as an interface between compiler Java binary code and the microprocessor (or "hardware platform") that actually performs the program's instructions. Once a Java virtual machine has been provided for a platform, any Java program (which, after compilation, is called bytecode) can run on that platform. Java was designed to allow application programs to be built that could be run on any platform without having to be rewritten or recompiled by the programmer for each separate platform. Java's virtual machine makes this possible. The Java virtual machine specification defines an abstract rather than a real "machine" (or processor) and specifies an instruction set, a set of registers, a stack, a "garbage heap," and a method area. The real implementation of this abstract or logically defined processor can be in other code that is recognized by the real processor or be built into the microchip processor itself. The output of "compiling" a Java source program (a set of Java language statements) is called bytecode. A Java virtual machine can either interpret the bytecode one instruction at a time (mapping it to a real microprocessor instruction) or the bytecode can be compiled further for the real microprocessor using what is called a just-in-time compiler.

Question: What are Registers and why these are needed?

Answer: Registers are like a scratch pad ram inside the processor and their operation is very much like normal memory cells. They have precise locations and remember what is placed inside them. They are used when we need more than one data element inside the processor at one time.

Question: What is Big-Endian and Little-Endian?

Answer: **Big-endian and little-endian** are terms that describe the order in which a sequence of bytes are stored in computer memory. Big-endian is an order in which the "big end" (most significant value in the sequence) is stored first (at the lowest storage address). Little-endian is an order in which the "little end" (least significant value in the sequence) is stored first. For example, in a big-endian computer, the two bytes required for the hexadecimal number 4F52 would be stored as 4F52 in storage (if 4F is stored at storage address 1000, for example, 52 will be at address 1001). In a little-endian system, it would be stored as 524F (52 at address 1000, 4F at 1001). IBM's 370 computers, most RISC-based computers, and Motorola microprocessors use the big-endian approach. On the other hand, Intel processors (CPUs) and DEC Alphas and at least some programs that run on them are littleendian.

Question: How we calculate Physical Address?

Answer: for the whole megabyte we need 20 bits while CS and IP are both 16bit registers. We need a mechanism to make a 20bit number out of the two 16bit numbers. Consider that the segment value is stored as a 20 bit number with the lower four bits zero and the offset value is stored as another 20 bit number with the upper four bits zeroed. The two are added to produce a 20bit absolute address. A carry if generated is dropped without being stored anywhere and the phenomenon is called address wraparound. The process is explained with the help of the following diagram. Therefore memory is determined by a segment-offset pair and not alone by any one register which will be an ambiguous reference. Every offset register is assigned a default segment register to resolve such ambiguity. For example the program we wrote when loaded into memory had a value of 0100 in IP register and some value say 1DDD in the CS register. Making both 20 bit numbers, the segment base is 1DDD0 and the offset is 00100 and adding them we get the physical memory address of 1DED0 where the opcode B80500 is placed.

Question: What is a Stack?

Answer: **Stack** is a data structure that behaves in a first in last out manner. It can contain many elements and there is only one way in and out of the container. When an element is inserted it sits on top of all other elements and when an element is removed the one sitting at top of all others is removed first. To visualize the structure consider a test tube and put some balls in it. The second ball will come above the first and the third will come above the second. When a ball is taken out only the one at the top can be removed. The operation of placing an element on top of the stack is called pushing the element and the operation of removing an element from the top of the stack is called popping the element. The last thing pushed in popped out first, the last in

Explain AND, OR and XOR operations with truth tables. [5 marks]

Explain the complete operation of interrupt when it is generated. [5 marks]

Tell the formula to scroll up the screen. [3 marks]

Why we need to clear the stack? [3 marks]

Define implied operand. [2 marks]

Why is it necessary to provide the segment and offset address in case of FAR jump?
[2 marks]

From where “ lds si, [bp + 4] ” will load SI and DS? [2 marks]

Which two registers are changed during CALL statement execution:

1. IP only
2. IP and SP only
3. SP only
4. BP and IP only

Question No: 1 (Marks: 1) - Please choose one

The physical address of the stack is obtained by

- SS:SI combination
- **SS:SP combination**
- ES:BP combination
- ES:SP combination

Question No: 2 (Marks: 1) - Please choose one

After the execution of instruction “RET ”

- **SP is incremented by 2**
- SP is decremented by 2
- SP is incremented by 1
- SP is decremented by 1

Question No: 3 (Marks: 1) - Please choose one

The second byte in the word designated for one screen location holds

- **Character color on the screen**
- The dimensions of the screen
- Character position on the screen
- Character color on the screen
- ASCII code of the character

Question No: 4 (Marks: 1) - Please choose one

REP will always

- Increment CX by 1
- Increment CX by 2
- **Decrement CX by 1**
- Decrement CX by 2

Question No: 5 (Marks: 1) - Please choose one

The basic function of SCAS instruction is to

- **Compare**
- Scan
- Sort
- Move data

Question No: 6 (Marks: 1) - Please choose one

Index registers are used to store _____

Data ►

Intermediate result ►

Address ►

Both data and addresses ►

Question No: 7 (Marks: 1) - Please choose one

The bits of the _____ work independently and individually

When a 32 bit number is divided by a 16 bit number, the quotient is of

Ans ► 4 bits

- 32 bits
- 16 bits
- 8 bits
- 4 bits

Question No: 10 (Marks: 1) - Please choose one

When a 16 bit number is divided by an 8 bit number, the quotient will be in

Ans: ► AL

- AX
- AL
- AH
- DX

Question No: 11 (Marks: 1) - Please choose one

Which mathematical operation is dominant during the execution of SCAS instruction

Ans: ► **Division**

- Division
- Multiplication
- Addition
- Subtraction

Question No: 12 (Marks: 1) - Please choose one

If AX contains decimal -2 and BX contains decimal 2 then after the execution of instructions:

CMP AX, BX

JA label

Ans: ► **Zero flag will set**

- Jump will be taken
- Zero flag will set
- ZF will contain value -4
- Jump will not be taken

Question No: 13 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES : 160], 0x1230” will print a character “0” on the screen at

Ans: ► First column of second row

- Second column of first row
- First column of second row
- Second column of second row
- First column of third row

Question No: 14 (Marks: 1) - Please choose one

If the direction of the processing of a string is from higher addresses towards lower addresses then

Ans: ► DF is cleared

- ZF is cleared
- DF is cleared
- ZF is set
- DF is set

Question No: 16 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the red component of background color ?

Ans: ► 3

► 3

► 4

► 5

► 6

Question No: 17 (Marks: 2)

What is difference between SHR and SAR instructions?

SHR

The SHR inserts a zero from the left and moves every bit one position to the right and copy the rightmost bit in the carry flag.

SAR

The SAR shift every bit one place to the right with a copy of the most significant bit left at the most significant place. The bit dropped from the right is caught in the carry basket. The sign bit is retained in this operation.

Question No: 18 (Marks: 2)

For what purpose "INT 1" is reserved ?

Question No: 19 (Marks: 2)

Define implied operand?

It is always in a particular register say the accumulator. It needs to not be mentioned in the instruction.

Question No: 20 (Marks: 3)

Describe the working of the CALL instruction with the reference of Stack.

Question No: 21 (Marks: 3)

Tell the Formula to scroll up the screen

rep movsw scroll up

scrollup: push bp

mov bp,sp

push ax

push cx

push si

push di

push es

push ds

mov ax, 80 ; load chars per row in ax

mul byte [bp+4] ; calculate source position

mov si, ax ; load source position in si

push si ; save position for later use

shl si, 1 ; convert to byte offset

mov cx, 2000 ; number of screen locations

sub cx, ax ; count of words to move

mov ax, 0xb800

mov es, ax ; point es to video base

mov ds, ax ; point ds to video base

xor di, di ; point di to top left column

cld ; set auto increment mode

rep movsw ; scroll up

mov ax, 0x0720 ; space in normal attribute

pop cx ; count of positions to clear

rep stgscb ; clear the scrolled space

Regarding assembler, which statement is true:

Assembler converts mnemonics to the corresponding OP CODE

Assembler converts OP CODE to the corresponding mnemonics.

Assembler executes the assembly code all at once

Assembler executes the assembly code step by step

Question No: 5

(Marks: 1) - Please choose one

If "BB" is the OP CODE of the instruction which states to "move a constant value to AX register", the hexadecimal representation (Using little Endian notation) of the instruction "Mov AX,336" ("150" in hexadecimal number system) will be:

0xBB0150

0x5001BB

0x01BB50

0xBB5001

Question No: 6

(Marks: 1) - Please choose one

In the instruction MOV AX, 5 the number of operands are

1

2

3

4

Question No: 7

(Marks: 1) - Please choose one

The maximum parameters a **subroutine** can receive (with the help of registers) are

6

7

8

9

Question No: 8

(Marks: 1) - Please choose one

In assembly the CX register is used normally as a _____ register.

source

counter

index

pointer

Question No: 9

(Marks: 1) - Please choose one

All the addressing mechanisms in iAPX 8 8 return a number called _____ address .

effective

faulty

indirect

direct

Question No: 10

(Marks: 1) - Please choose one

When a 16 bit number is divided by an 8 bit number, the dividend will be in

AX

will be always 1

Question No: 12

(Marks: 1) - Please choose one

Suppose the decimal number "35" after shifting its binary two bits to left, the new value becomes _____

35

70

140

17

Question No: 13

(Marks: 1) - Please choose one

When divide overflow occurs processor will be interrupted this type of interrupt is called
Hardware interrupt

Software interrupt

Processor exception

Logical interrupts

Question No: 14

(Marks: 1) - Please choose one

Which mathematical operation is dominant during the execution of SCAS instruction

Division

Multiplication

Addition

Subtraction

Question No: 15

(Marks: 1) - Please choose one

After the execution of REP instruction CX will be decremented then which of the following flags will be affected?

CF

OF

DF

No flags will be affected

Question No: 16

(Marks: 1) - Please choose one

_____ is one of the reasons due to which string instructions are used in 8088

Efficiency and accuracy

Reduction in code size and accuracy

Reduction in code size and speed

Reduction in code size and efficiency

Question No: 17

(Marks: 1)

Question No: 19

(Marks: 2)

Explain the function of rotate right (ROR) instruction

Question No: 20

(Marks: 2)

Describe the PUSH function

The push operation copies its operand on the stack, while the pop operation makes a copy from the top of the stack into

Question No: 21

(Marks: 3)

Write down the names of four segment registers?

(CS, DS, SS, and ES)

Question No: 22

(Marks: 3)

For what purpose "INT 4" is reserved?

INT 4, Arithmetic Overflow, change of sign bit

Question No: 23

(Marks: 5)

Given that [BX+0x0100] BX=0x0100

DS=0xFFFF0

Calculate the physical address

Question No: 1 (Marks: 1) - Please choose one

The physical address of the stack is obtained by

- ▶ **SS:SP combination**
- ▶ SS:SI combination
- ▶ **SS:SP combination**
- ▶ ES:BP combination
- ▶ ES:SP combination

Question No: 2 (Marks: 1) - Please choose one

After the execution of instruction "RET "

- ▶ **SP is incremented by 2**
- ▶ **SP is incremented by 2**
- ▶ SP is decremented by 2
- ▶ SP is incremented by 1

Th

► **Character color on the screen**

► ASCII code of the character

Question No: 4 (Marks: 1) - Please choose one

REP will always

► **Decrement CX by 1**

► Increment CX by 1

► Increment CX by 2

► **Decrement CX by 1**

► Decrement CX by 2

Question No: 5 (Marks: 1) - Please choose one

The basic function of SCAS instruction is to

► **Compare**

► **Compare**

► Scan

► Sort

► Move data

Question No: 6 (Marks: 1) - Please choose one

Index registers are used to store _____

Address ► =====

Data ►

Intermediate result ►

Address ► =====

Both data and addresses ►

Question No: 7 (Marks: 1) - Please choose one

_____ bits of the _____ work independently and individually

flags register ► =====

index register ►

base register ►

flags register ► =====

accumulator ►

Question No: 8 (Marks: 1) - Please choose one

convert any digit to its ASCII representation

► **Add 0x30 in the digit**

► **Add 0x30 in the digit**

► Subtract 0x30 from the digit

► Add 0x61 in the digit

► Subtract 0x61 from the digit

Th

To

- ▶ **AL**
 - ▶ AX
 - ▶ **AL**
 - ▶ AH
 - ▶ DX

Question No: 11 (Marks: 1) - Please choose one

Which mathematical operation is dominant during the execution of SCAS instruction

- ▶ **Division**
- ▶ **Division**
- ▶ Multiplication
- ▶ Addition
- ▶ Subtraction

Question No: 12 (Marks: 1) - Please choose one

If

AX contains decimal -2 and BX contains decimal 2 then after the execution of instructions:

CMP AX, BX

JA label

- ▶ **Zero flag will set**
- ▶ Jump will be taken
- ▶ **Zero flag will set**
- ▶ ZF will contain value -4
- ▶ Jump will not be taken

Question No: 13 (Marks: 1) - Please choose one

Th

e execution of the instruction “mov word [ES : 160], 0x1230” will print a character “0” on the screen at

- ▶ **First column of second row**
- ▶ Second column of first row
- ▶ **First column of second row**
- ▶ Second column of second row
- ▶ First column of third row

Question No: 14 (Marks: 1) - Please choose one

If the direction of the processing of a string is from higher addresses towards lower addresses then

- ▶ **DF is cleared**
- ▶ ZF is cleared
- ▶ **DF is cleared**
- ▶ ZF is set
- ▶ DF is set

Question No: 15 (Marks: 1) - Please choose one

Th

e instruction ADC has_____ Operand(s)

- ▶ **3**

- ▶ 4
- ▶ 5
- ▶ 6

Question No: 17 (Marks: 2)

W

What is difference between SHR and SAR instructions?

SHR

The SHR inserts a zero from the left and moves every bit one position to the right and copy the rightmost bit in the carry flag.

SAR

The SAR shift every bit one place to the right with a copy of the most significant bit left at the most significant place

Question No: 18 (Marks: 2)

For what purpose "INT 1" is reserved ?

Question No: 19 (Marks: 2)

Define implied operand?

It is always in a particular register say the accumulator. It needs to not be mentioned in the instruction.

2. 8 * 16 font is stored in _____ bytes.

- ☐ 3
- ☐ 4
- ☐ 8
- ☒ 16

3. In DOS input buffer , number of characters actually read on return is stored in

- ☐ First byte
- ☒ **Second byte**
- ☐ Third byte
- ☐ Fourth byte

4. IRQ 0 has priority

- ☐ Low
- ☐ High
- ☒ **Highest**
- ☐ Medium

5. Thread registration code initialize PCB and add to linked list so that _____ will give it turn.

- ☐ Assembler
- ☐ Linker
- ☒ **Scheduler**
- ☐ Debugger

6. Traditional calling conventions are in _____ number

- ☐ 1
- ☒ **2**
- ☐ 3
- ☐ 4

7. VESA VEB 2.0 is standard for

- ☒ **High Resolution Mode**
- ☐ Low Resolution Mode
- ☐ Very High Resolution Mode

- ☐ ☐ Incremented by 1
- ☒ ☐ **Incremented by 2**
- ☐ ☐ Decrement by 1
- ☐ ☐ Decrement by 2

10. Interrupt that is used in debugging with help of trap flag is

- ☐ ☐ INT 0
- ☒ ☐ **INT 1**
- ☐ ☐ INT 2
- ☐ ☐ INT 3

11. INT for arithmetic overflow is

- ☐ ☐ INT 1
- ☐ ☐ INT 2
- ☐ ☐ INT 3
- ☒ ☐ **INT 4**

12. IRQ referred as

- ☒ ☐ **Eight Input signals**
- ☐ ☐ One Input signal
- ☐ ☐ Eight Output signals
- ☐ ☐ One output signal

13. IRQ for keyboard is 1

14. IRQ for sound card is 5

15. IRQ for floppy disk is 6

16. IRQ with highest priority is

- ☐ ☐ Keyboard IRQ
- ☒ ☐ **Timer IRQ**
- ☐ ☐ Sound Card
- ☐ ☐ Floppy Disk

17. Pin for parallel port ground is

- ☐ ☐ 10-18
- ☒ ☐ **18-25**
- ☐ ☐ 25-32
- ☐ ☐ 32-39

18. The physical address of Interrupt Descriptor Table (IDT) is stored in

- ☐ ☐ GDTR
- ☒ ☐ **IDTR**
- ☐ ☐ IVT
- ☐ ☐ IDTT

19. Execution of "RET 2" results in?

20. CX register is

- ☒ ☐ **Count register**
- ☐ ☐ Data register
- ☐ ☐ Index register
- ☐ ☐ Base register

23. If two devices uses same IRQ then there is

- ☐ IRQ collision
- ☐ IRQ conflict
- ☐ IRQ drop

24. VESA organizes 16 bit color for every pixel in ratio

- ☐ 5:5:5
- ☐ 5:6:5
- ☐ 6:5:6
- ☐ 5:6:7

25. Division by zero is done by which interrupt.

Interrupt 0.

.....

Question No: 1 (Marks: 1) - Please choose one

After the execution of SAR instruction

► The msb is replaced by a 0

- The msb is replaced by 1
- The msb retains its original value
- The msb is replaced by the value of CF

Question No: 2 (Marks: 1) - Please choose one

RETF will pop the offset in the

- BP
- IP
- SP
- SI

Question No: 3 (Marks: 1) - Please choose one

The routine that executes in response to an INT instruction is called

► ISR

- IRS
- ISP
- IRT

Question No: 4 (Marks: 1) - Please choose one

The first instruction of "COM" file must be at offset:

- 0x0010
- 0x0100
- 0x1000
- 0x0000

Question No: 5 (Marks: 1) - Please choose one

"Far" jump is not position relative but is _____

- memory dependent
- Absolute

- ▶ stack

Question No: 7 (Marks: 1) - Please choose one

After the execution of instruction "RET 2"

▶ SP is incremented by 2

- ▶ SP is decremented by 2
- ▶ SP is incremented by 4
- ▶ SP is decremented by 4

Question No: 8 (Marks: 1) - Please choose one

DIV instruction has

▶ Two forms

- ▶ Three forms
- ▶ Four forms
- ▶ Five forms

Question No: 9 (Marks: 1) - Please choose one

When the operand of DIV instruction is of 16 bits then implied dividend will be of

- ▶ 8 bits
- ▶ 16 bits
- ▶ 32 bits
- ▶ 64 bits

Question No: 10 (Marks: 1) - Please choose one

After the execution of MOVS instruction which of the following registers are updated

- ▶ SI only
- ▶ DI only
- ▶ SI and DI only
- ▶ SI, DI and BP only

Question No: 11 (Marks: 1) - Please choose one

In 8088 architecture, whenever an element is pushed on the stack

- ▶ SP is decremented by 1
- ▶ SP is decremented by 2
- ▶ SP is decremented by 3
- ▶ SP is decremented by 4

Question No: 12 (Marks: 1) - Please choose one

When a very large number is divided by very small number so that the quotient is larger than the space provided, this is called

- ▶ Divide logical error
- ▶ Divide overflow error

- ▶ The parameters
- ▶ The dimensions

Question No: 14 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

▶ mov AX, 0xb008
 mov ES, AX
 ▶ mov AX, 0xb800
mov ES, AX
 ▶ mov AX, 0x8b00
 mov ES, AX
 ▶ mov AX, 0x800b
 mov ES, AX

Question No: 15 (Marks: 1) - Please choose one

In a video memory, each screen location corresponds to

▶ One byte
 ▶ Two bytes
 ▶ Four bytes
 ▶ Eight bytes

Question No: 16 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES : 0], 0x0741” will print character “A” on screen , background color of the screen will be

▶ Black
 ▶ White
 ▶ Red
 ▶ Blue

. Serial Port is also accessible via I/O ports , COM 1 is accessible via ports 3F8-3FF while COM 2 is accessible via 2F8 -2FF.

The first register at 3F8 is the Transmitter holding register if written to and the receiver buffer register if read from.

Other register of our interest include 3F9 whose Bit 0 must be set to enable received data available interrupt and Bit 1 must be set to enable transmitter holding register empty interrupt.

(Transmitter, COM 1, I/O ports , COM2. bit 0 , Buffer , 3FA)

Question # 1

There are three busses to communicate the processor and memory named as

- 1) : address bus.,data bus and data bus.
- 2) : addressing bus.,data bus and data bus.
- 3) : address bus.,datamove bus and data bus.
- 4) : **address bus.,data bus and control bus..**

Correct Option : 4 From : Lecture 1

Question # 2

3) : **Data moves from both, processor to memory and memory to data Bus,**

4) : None of the Given

Correct Option : 3 From : Lecture 1

Question # 4

Control bus _____

1) : is Not Important.

2) : is Important .

3) : **bidirectional.**

4) : unidirectional .

Correct Option : 3 From : Lecture 1

Question # 5

A memory cell is an n-bit location to store data, normally _____ also called a byte

1) : 4-bit

2) : **8-bit**

3) : 6-bit

4) : 80-bit

Correct Option : 2 From : Lecture 1

Question # 6

The number of bits in a cell is called the cell width. _____ define the memory completely.

1) : **Cell width and number of cells,**

2) : cell number and width of the cells,

3) : width

4) : Height

Correct Option : 1 From : Lecture 1

Question # 7

for memory we define two dimensions. The first dimension defines how many _____ bits are there in a single memory cell.

1) : **parallel**

2) : Vertical

3) : long

4) : short

Correct Option : 1 From : Lecture 1

Question # 8

_____ operation requires the same size of data bus and memory cell width.

1) : Normal

2) : **Best and simplest**

3) : first

4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 9

Control bus is only the mechanism. The responsibility of sending the appropriate signals on the control bus to the memory is of the _____.

1) : Data Bus

2) : **processor**

3) : Address Bus

4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 10

In "total: dw 0 " Opcode total is a _____

1) : Literal

2) : Variable

3) : **Label**

4) : Starting point

Question # 12

| C | <--| 1 | 1 | 0 | 1 | 0 | 0 | 0 | <--| 0 | is a example of _____

- 1) : **Shl**
- 2) : sar
- 3) : Shr
- 4) : Sal

Correct Option : 1 From : Lecture 10

Question # 13

ADC has _____ operands.

- 1) : two
- 2) : **three**
- 3) : Five
- 4) : Zero

Correct Option : 2 From : Lecture 10

Question # 14

The basic purpose of a computer is to perform operations, and operations need

_____.

- 1) : order
- 2) : nothing
- 3) : **operands**
- 4) : bit

Correct Option : 3 From : Lecture 2

Question # 15

Registers are like a scratch pad ram inside the processor and their operation is very much like normal_____.

- 1) : Number
- 2) : ooperations
- 3) : **memory cells**
- 4) : None of the Given

Correct Option : 3 From : Lecture 2

Question # 16

There is a central register in every processor called the _____ and The word size of a processor is defined by the width of its_____.

- 1) : **accumulator,accumulator**
- 2) : data bus,accumulator
- 3) : accumulator, Address Bus
- 4) : accumulator,memory

Correct Option : 1 From : Lecture 2

Question # 17

_____ does not hold data but holds the address of data

- 1) : Pointer, Segment, or Base Register
- 2) : **Pointer, Index, or Base Register**
- 3) : General Registers
- 4) : Instruction Pointer

Correct Option : 2 From : Lecture 2

Question # 18

"The program counter holds the address of the next instruction to be _____"

- 1) : **executed.**
- 2) : called
- 3) : deleted
- 4) : copy

Correct Option : 1 From : Lecture 2

Question # 19

There are _____ types of "instruction groups"

3) :

4) :

Correct Option : 1 From : Lecture 2

Question # 21

"mov" instruction is related to the _____ *****.

1) : Arithmetic and Logic Instructions

2) : **Data Movement Instructions**

3) : Program Control Instructions

4) : Special Instructions

Correct Option : 2 From : Lecture 2

Question # 22

_____ allow changing specific processor behaviors and are used to play with it.

1) : **Special Instructions**

2) : Data Movement Instructions

3) : Program Control Instructions

4) : Arithmetic and Logic Instructions

Correct Option : 1 From : Lecture 2

Question # 23

8088 is a 16bit processor with its accumulator and all registers of _____.

1) : 32 bits

2) : 6 bits

3) : **16 bits**

4) : 64 bits

Correct Option : 3 From : Lecture 2

Question # 24

The _____ of a processor means the organization and functionalities of the registers it contains and the instructions that are valid on the processor.

1) : Manufactures

2) : **architecture**

3) : Deal

4) : None of the Given

Correct Option : 2 From : Lecture 2

Question # 25

Intel IAPX88 Architecture is _____.

1) : **More then 25 old**

2) : New

3) : Not Good

4) : None of the Given

Correct Option : 1 From : Lecture 2

Question # 26

The iAPX88 architecture consists of _____ registers.

1) : 13

2) : 12

3) : 9

4) : **14**

Correct Option : 4 From : Lecture 3

Question # 27

General Registers are _____.

1) : **AX, BX, CX, and DX**

2) : XA, BX, CX, and DX

3) : SS, SI and DI

4) : 3

Correct Option : 1 From : Lecture 3

AX is General purpose Register where A stands for _____.

- 1) : Acadmic
- 2) : Ado
- 3) : Architecture
- 4) : **Accumulator**

Correct Option : 4 From : Lecture 3

Question # 30

The B of BX stands for _____ because of its role in memory addressing.

- 1) : Busy
- 2) : **Base**
- 3) : Better
- 4) : None of the Given

Correct Option : 2 From : Lecture 3

Question # 31

The D of DX stands for Destination as it acts as the destination in _____.

- 1) : **I/O operations**
- 2) : operations
- 3) : memory cells
- 4) : Memory I/O operations

Correct Option : 1 From : Lecture 3

Question # 32

The C of CX stands for Counter as there are certain instructions that work with an automatic count in the _____.

- 1) : DI register
- 2) : BX register
- 3) : **CX register**
- 4) : DX register

Correct Option : 3 From : Lecture 3

Question # 33

_____ are the index registers of the Intel architecture which hold address of data and used in memory access.

- 1) : SI and SS
- 2) : PI and DI
- 3) : SI and IP
- 4) : **SI and DI**

Correct Option : 4 From : Lecture 3

Question # 34

In Intel IAPX88 architecture _____ is the special register containing the address of the next instruction to be executed.

- 1) : AX
- 2) : PI
- 3) : **IP**
- 4) : SI

Correct Option : 3 From : Lecture 3

Question # 35

SP is a memory pointer and is used indirectly by a set of _____.

- 1) : **instructions**
- 2) : Pointers
- 3) : Indexes
- 4) : Variables

Correct Option : 1 From : Lecture 3

Question # 36

_____ is also a memory pointer containing the address in a special area of memory called the stack.

3) : IP

4) : **Flags Register**

Correct Option : 4 From : Lecture 3

Question # 38

When two 16bit numbers are added the answer can be 17 bits long, this extra bit that won't fit in the target register is placed in the _____ where it can be used and tested

1) : **carry flag**

2) : Parity Flag

3) : Auxiliary Carry

4) : Zero Flag

Correct Option : 1 From : Lecture 3

Question # 39

Program is an ordered set of instructions for the processor.

1) : **TRUE**

2) : FALSE

3) :

4) :

Correct Option : 1 From : Lecture 3

Question # 40

For Intel Architecture "operation destination, source" is way of writing things.

1) : **TRUE**

2) : FALSE

3) :

4) :

Correct Option : 1 From : Lecture 3

Question # 41

Operation code " add ax, bx " _____.

1) : Add the bx to ax and change the bx

2) : Add the ax to bx and change the ax

3) : **Add the bx to ax and change the ax**

4) : Add the bx to ax and change nothing

Correct Option : 3 From : Lecture 3

Question # 42

The maximum memory iAPX88 can access is _____.

1) : **1MB**

2) : 2MB

3) : 3MB

4) : 128MB

Correct Option : 1 From : Lecture 4

Question # 43

The maximum memory iAPX88 can access is 1MB which can be accessed with

_____.

1) : 18 bits

2) : **20 bits**

3) : 16 bits

4) : 2 bits

Correct Option : 2 From : Lecture 4

Question # 44

_____ address of 1DED0 where the opcode B80500 is placed.

1) : **physical memory**

2) : memory

3) : efective

4) : None of the Given

Correct Option : 1 From : Lecture 4

Question # 46

When adding two 20bit Addresses a carry if generated is dropped without being stored anywhere and the phenomenon is called address_____.

1) : **wraparound**

2) : mode

3) : ping

4) : error

Correct Option : 1 From : Lecture 4

Question # 47

segments can only be defined a 16byte boundaries called _____ boundaries.

1) : **segment**

2) : paragraph

3) : Cell

4) : RAM

Correct Option : 1 From : Lecture 4

Question # 48

in a Program CS, DS, SS, and ES all had the same value in them. This is called

_____.

1) : equal memory

2) : **overlapping segments**

3) : segments hiding

4) : overlapping SI

Correct Option : 2 From : Lecture 4

Question # 49

"db num1" size of the memory is _____

1) : **1byte**

2) : 4bit

3) : 16bit

4) : 2byte

Correct Option : 1 From : Lecture 5

Question # 50

"1-----[org 0x0100]

2-----mov ax, [num1] ; load first number in ax

3-----mov bx, [num2] ; load second number in bx

4-----add ax, bx _____

5-----int 0x21

6-----

7-----num1: dw 5

8-----num2: dw 10

Comments for the 4 are :

1) : No comments Will be

2) : ; accumulate sum in add

3) : ; **accumulate sum in ax**

4) : ; accumulate sum in Bx

Correct Option : 3 From : Lecture 5

Question # 51

In " mov ax, bx " is _____ Addressing Modes.

1) : Immediate

2) : Indirect

3) : Direct

4) : **Register**

Correct Option : 4 From : Lecture 5

1) : **Immediate**

2) : Indirect

3) : Indirect

4) : Register

Correct Option : 1 From : Lecture 6

Question # 54

In "mov ax, [num1+bx]" is _____ ADDRESSING

1) : OFFSET+ Indirect

2) : Register + Direct

3) : Indirect + Reference

4) : **BASEd REGISTER + OFFSET**

Correct Option : 4 From : Lecture 7

Question # 55

"base + offset addressing" gives This number which came as the result of addition is called the _____.

1) : Address

2) : mode

3) : **effective address**

4) : Physical Address

Correct Option : 3 From : Lecture 7

Question # 56

"mov ax, [cs:bx]" associates _____ for this one instruction

1) : CS with BX

2) : **BX with CS**

3) : BX with AX

4) : None of the Given

Correct Option : 2 From : Lecture 7

Question # 57

For example

BX=0100

DS=FFF0

And Opcode are;

move [bx+0x0100], Ax

now what is the effective memory address;

1) : 0020

2) : **0200**

3) : 0300

4) : 0x02

Correct Option : 2 From : Lecture 7

Question # 59

In "mov [1234], al" is _____ Addressing Modes.

1) : Immediate

2) : Indirect

3) : **Direct**

4) : Register

Correct Option : 3 From : Lecture 8

Question # 60

In "mov [SI], AX" is _____ Addressing Modes.

1) : Base Register Indirect

2) : Indirect

3) : **Indexed Register Indirect**

4) : Immediate

Correct Option : 3 From : Lecture 8

In "mov ax, [BL]" there is error i.e. _____

- 1) : Address must be 16bit
- 2) : Address must be 8bit
- 3) : Address must be 4bit

4) : 8 bit to 16 bit move illegal

Correct Option : 4 From : Lecture 8

Question # 63

In "mov ax, [SI+DI]" there is error i.e. _____

- 1) : **Two indexes can't use as Memory Address**
- 2) : index can't use as Memory Address
- 3) : I don't Know
- 4) : None of the Given

Correct Option : 1 From : Lecture 8

Question # 64

In JNE and JNZ there is difference for only _____;

- 1) : **Programmer or Logic**
- 2) : Assembler
- 3) : Debugger
- 4) : IAPX88

Correct Option : 1 From : Lecture 9

Question # 65

JMP is Instruction that on executing take jump regardless of the state of all flags is called _____

- 1) : Jump
- 2) : Conditional jump
- 3) : **Unconditional jump**
- 4) : Stay

Correct Option : 3 From : Lecture 9

Question # 66

When result of the source subtraction from the destination is zero, zero flag is set i.e. ZF=1 its mean that;

- 1) : **DEST = SRC**
- 2) : DEST != SRC
- 3) : DEST < SRC
- 4) : DEST > SRC

Correct Option : 1 From : Lecture 9

Question # 67

When an unsigned source is subtracted from an unsigned destination and the destination is smaller, borrow is needed which sets the _____.

- 1) : carry flag i.e CF = 0
- 2) : **carry flag i.e CF = 1**
- 3) : Carry Flag + ZF=1
- 4) : None of the Given

Correct Option : 2 From : Lecture 9

Question # 68

In the case of unsigned source and destination when subtracting and in the result ZF =1 OR CR=1 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : **UDEST ? USRC**
- 4) : DEST > SRC

Correct Option : 3 From : Lecture 9

Question # 69

In the case of unsigned source and destination when subtracting and in the result ZF =0

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST < USRC
- 4) : **UDEST ? USRC**

Correct Option : 4 From : Lecture 9

Question # 71

_____ This jump is taken if the last arithmetic operation produced a zero in its destination. After a CMP it is taken if both operands were equal.

- 1) : **Jump if zero(JZ)/Jump if equal(JE)**
- 2) : Jump if equal(JE)
- 3) : Jump if zero(JZ)
- 4) : No Jump for This

Correct Option : 1 From : Lecture 9

Question # 72

_____ This jump is taken after a CMP if the unsigned source is smaller than or equal to the unsigned destination.

- 1) : JBE(Jump if not below or equal)
- 2) : **JNA(Jump if not above)/JBE(Jump if not below or equal)**
- 3) : JNA(Jump if not above)
- 4) : No Jump for This

Correct Option : 2 From : Lecture 9

Question # 1

Numbers of any size can be added using a proper combination of _____.

- 1) : **ADD and ADC**
- 2) : ABD and ADC
- 3) : ADC and ADC
- 4) : None of the Given

Correct Option : 1 From : Lecture 11

Question # 2

Like addition with carry there is an instruction to subtract with borrows called _____.

- 1) : SwB
- 2) : **SBB**
- 3) : SBC
- 4) : SBBC

Correct Option : 2 From : Lecture 11

Question # 3

if "and ax, bx" instruction is given, There are _____ operations as a result

- 1) : 16 AND
- 2) : 17 AND
- 3) : 32 AND
- 4) : 8 AND

Correct Option : 1 From : Lecture 12

Question # 4

_____ can be used to check whether particular bits of a number are set or not.

- 1) : **AND**
- 2) : OR
- 3) : XOR
- 4) : NOT

Correct Option : 1 From : Lecture 12

Question # 5

_____ can also be used as a masking operation to invert selective bits.

- 1) : **AND**
- 2) : OR
- 3) : XOR
- 4) : NOT

Question # 7

The _____ instruction allows temporary diversion and therefore reusability of code.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 1 From : Lecture 13

Question # 8

CALL takes a label as _____ and execution starts from that label,

- 1) : argument
- 2) : Lable
- 3) : TXt
- 4) : Register

Correct Option : 1 From : Lecture 13

Question # 9

When the _____ instruction is encountered and it takes execution back to the instruction following the CALL.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 2 From : Lecture 13

Question # 10

_____ Both the instructions are commonly used as a pair, however technically they are independent in their operation.

- 1) : RET and ADC
- 2) : Cal and SSb
- 3) : CALL and RET
- 4) : ADC and SSB

Correct Option : 3 From : Lecture 13

Question # 11

The CALL mechanism breaks the thread of execution and does not change registers, except _____.

- 1) : SI
- 2) : IP
- 3) : DI
- 4) : SP

Correct Option : 2 From : Lecture 13

Question # 12

Stack is a _____ that behaves in a first in last out manner.

- 1) : Program
- 2) : data structure
- 3) : Heap
- 4) : None of the Given

Correct Option : 2 From : Lecture 14

Question # 13

If _____ is not available, stack clearing by the callee is a complicated process.

- 1) : CALL
- 2) : SBB
- 3) : RET n
- 4) : None of the Given

Correct Option : 3 From : Lecture 14

Question # 14

When the stack will eventually become full, SP will reach 0, and thereafter wraparound

2) : operand

3) : RET n

4) : Pointer

Correct Option : 2 From : Lecture 14

Question # 16

_____ decrements SP (the stack pointer) by two and then transfers a word from the source operand to the top of stack

1) : PUSH

2) : POP

3) : CALL

4) : RET

Correct Option : 1 From : Lecture 14

Question # 17

POP transfers the word at the current top of stack (pointed to by SP) to the destination operand and then _____ SP by two to point to the new top of stack.

1) : increments

2) : decrements

3) : ++

4) : --

Correct Option : 1 From : Lecture 14

Question # 18

The trick is to use the _____ and _____ operations and save the callers' value on the stack and recover it from there on return.

1) : POP, ADC

2) : CALL, RET

3) : CALL, RET n

4) : PUSH, POP

Correct Option : 4 From : Lecture 14

Question # 19

To access the arguments from the stack, the immediate idea that strikes is to _____ them off the stack.

1) : PUSH

2) : POP

3) : CALL

4) : Register

Correct Option : 2 From : Lecture 15

Question # 20

push bp

we are _____

1) : sending bp copy to stack

2) : making bp copy from stack

3) : pushing bp on the stack

4) : doing nothing

Correct Option : 3 From : Lecture 15

Question # 21

Local Variables means variables that are used within the _____

1) : Subroutine

2) : Program

3) : CALL

4) : Label

Correct Option : 1 From : Lecture 15

Question # 22

Standard ASCII has 128 characters with assigned numbers from _____.

1) : 1 to 128

3) : 0x30

4) : 0x40

Correct Option : 4 From : Lecture 16

Question # 24

Which bit is refer to the Blinking of foreground character

1) : 6

2) : 7

3) : 5

4) : 3

Correct Option : 2 From : Lecture 16

Question # 25

Which bit is refer to the Intensity component of foreground color

1) : 4

2) : 5

3) : 3

4) : 7

Correct Option : 3 From : Lecture 16

Question # 26

Which bit is refer to the Green component of background color

1) : 1

2) : 5

3) : 3

4) : 7

Correct Option : 2 From : Lecture 16

Question # 27

Which bit is refer to the Green component of foreground color

1) : 1

2) : 5

3) : 3

4) : 7

Correct Option : 1 From : Lecture 16

Question # 28

String can be indicate bye given

1) : db 0x61, 0x61, 0x63

2) : db 'a', 'b', 'c'

3) : db 'abc'

4) : All of the above

Correct Option : 4 From : Lecture 16

Question # 29

The first form divides a 32bit number in DX:AX by its 16bit operand and stores the quotient in AX

1) : 16bit

2) : 17bit

3) : 32bit

4) : 64bit

Correct Option : 1 From : Lecture 17

Question # 30

The _____ (division) used in the process is integer division and not floating point division.

1) : DIV instruction

2) : ADC instruction

3) : SSB instruction

4) : DIVI instruction

Correct Option : 1 From : Lecture 17

Question # 32

The desired location on the screen can be calculated with the following formulae.

- 1) : $\text{location} = (\text{hypos} * 80 + \text{SP}) * 3$
- 2) : $\text{location} = (\text{hypos} * 80 + \text{slocation}) * 2$
- 3) : $\text{location} = (\text{hypos} * 80 + \text{epos}) * 2$
- 4) : None of the Given

Correct Option : 3 From : Lecture 18

Question # 33

To play with string there are 5 instructions that are _____

- 1) : **STOS, LODS, CMPS, SCAS, and MOVS**
- 2) : MUL, DIV, ADD, ADC and MOVE
- 3) : SSB, ADD, CMPS, ADC, and MOVS
- 4) : None of the Given

Correct Option : 1 From : Lecture 18

Question # 34

_____ transfers a byte or word from register AL or AX to the string element addressed by ES:DI and updates DI to point to the next location.

- 1) : LODS
- 2) : **STOS**
- 3) : SCAS
- 4) : MOVE

Correct Option : 2 From : Lecture 18

Question # 35

_____ transfers a byte or word from the source location DS:SI to AL or AX and updates SI to point to the next location.

- 1) : **LODS**
- 2) : STOS
- 3) : SCAS
- 4) : MOVE

Correct Option : 1 From : Lecture 18

Question # 36

_____ compares a source byte or word in register AL or AX with the destination string element addressed by ES: DI and updates the flags.

- 1) : LODS
- 2) : STOS
- 3) : **SCAS**
- 4) : MOVE

Correct Option : 3 From : Lecture 18

Question # 37

_____ repeat the following string instruction while the zero flag is set and REPNE or REPNZ repeat the following instruction while the zero flag is not set.

- 1) : REP or REPZ
- 2) : **REPE or REPZ**
- 3) : REPE or RPZ
- 4) : RPE or REPZ

Correct Option : 2 From : Lecture 18

Question # 38

LES loads _____

- 1) : **ES**
- 2) : DS
- 3) : PS
- 4) : LS

Correct Option : 1 From : Lecture 20

Question # 39

1) : DX

2) : CX

3) : BX

4) : AX

Correct Option : 2 From : Lecture 20

Question # 41

_____ pops IP, then CS, and then FLAGS.

1) : Ret n

2) : REZA

3) : REPE

4) : **IRET**

Correct Option : 4 From : Lecture 21

Question # 42

_____, Trap, Single step Interrupt

1) : INT 0

2) : INT 1

3) : INT 3

4) : INT 0

Correct Option : 2 From : Lecture 21

Question # 43

_____, NMI-Non Maskable Interrupt

1) : INT 0

2) : INT 1

3) : INT 3

4) : INT 0

Correct Option : 3 From : Lecture 21

Question # 44

To hook an interrupt we change the _____ corresponding to that interrupt.

1) : SX

2) : vector

3) : AX

4) : BX

Correct Option : 2 From : Lecture 22

Question # 1

_____ pops IP, then CS, and then FLAGS.

1) : Ret n

2) : REZA

3) : REPE

4) : **IRET**

Correct Option : 4 From : Lecture 21

Question # 2

_____, Trap, Single step Interrupt

1) : INT 0

2) : INT 1

3) : INT 3

4) : INT 0

Correct Option : 2 From : Lecture 21

Question # 3

_____, NMI-Non Maskable Interrupt

1) : INT 0

2) : INT 1

3) : INT 3

4) : INT 0

Correct Option : 3 From : Lecture 21

UBAID SAHI

Stack is a _____ that behaves in a first in last out manner.

- Program
- [data structure](#)
- Heap
- None of the Given

The physical address of the stack is obtained by

- SS:SI combination
- [SS:SP combination](#)
- ES:BP combination
- ES:SP combination

Foreground and background parameter will be

- 32bits
- 16bits
- [8bits](#)
- 4bits

The clear screen operation initialize whole block of memory

- [0741](#)
- 0417
- 0714
- 0174

In STOSB instruction, when DF is Set, SI is

- Incremented by 1
- Incremented by 2
- **Decrement by 1 (Not confirmed)**
- Decrement by 2

Assembly language is:

- [Low-level programming language](#)
- High-level programming language
- Also known as machine language
- Not considered closer to the computer

A 32 Bit processor has accumulator of -----

- 8 bit
- 16 bit
- [32 bit](#)
- 64 bit

To transfer control back the RET instruction take

- 1 argument
- 1 argument
- 3 arguments
- [No arguments](#)

RET is executed, it recovers the values from

- Register
- [Stack](#)
- Data segment
- Code segment

To convert any digit to its ASCII representation

- [Add 0x30 in the digit](#)
- Subtract 0x30 from the digit
- Add 0x61 in the digit
- Subtract 0x61 from the digit

The prevalent convention in most high level languages is stack clearing by the

- **Caller**
- [Callee](#)
- **RET**
- **Stack**

After execution of JCXZ instruction CX will changed with flag affect.

- CF
- OF

- Jump will be taken
- Zero flag will set
- ZF will contain value -4
- Jump will not be taken

Which of the following options contain the set of instructions to open a window to the video memory?

- mov AX, 0xb008
mov ES, AX
- mov AX, 0xb800
mov ES, AX
- mov AX, 0x8b00
mov ES, AX
- mov AX, 0x800b

mov ES, AX

If D is “35” is shift to left 2 bits the new value

- 35
- 70
- 140
- 17

Execution of the instruction “mov word [ES : 0], 0x1230” will print the character color will

- Green
- White
- Red
- Black

Q#21 Mark 2

What are the instructions used by assembly language for permanent and temporary diversions.

Q#22 Mark 2

Which instruction is used to determine zero bit in string.

Q#23 Mark 3

Explain the use of TEST instruction.

The test instruction is used for bit testing. BX holds the mask and in every next iteration it is shifting left, as our concerned bit is now the next bit.

Q#24 Mark 3

Explain LES and LDS

The string instructions need source and destination in the form of a segment/offset pair. LES and LDS load a segment register and a general purpose register from two consecutive memory locations. LES loads ES while LDS loads DS. Both instructions has two parameters, one is the general purpose register to be loaded and the other is the memory location from which to load these registers. The major application of these instructions is when a subroutine receives a segment offset pair as an argument and the pair is to be loaded in a segment and an offset register.

Q#25 Mark 5

Describe local variables.

Another important role of the stack is in the creation of local variables that are only needed while the subroutine is in execution and not afterwards. They should not take permanent space like global variables. Local variables should be created when the subroutine is called and discarded afterwards. So that the space used by them can be reused for the local variables of another subroutine. They only have meaning inside the subroutine and no meaning outside it. The most convenient place to store these variables is the stack. We need some special manipulation of the stack for this task. We need to produce a gap in the stack for our variables. This is explained with the help of the swapflag in the bubble sort example.

The swapflag we have declared as a word occupying space permanently is only needed by the bubble sort subroutine and should be a local variable. Actually the variable was introduced with the intent of making it a local variable at this time. The stack pointer will be decremented by an extra two bytes thereby producing a gap in which a word can reside. This gap will be used for our temporary, local, or automatic variable; however we name it. We can decrement it as much as we want producing the desired space, however the decrement must be by an even number, as the unit of stack operation is a word. In our case we needed just one word. Also the most convenient position for this gap is immediately after saving the value of SP in BP. So that the same base pointer can be used to access the local variables as well; this time using negative offsets. The standard way to start a subroutine which needs to access parameters and has local variables is as under.

```
push bp
mov bp, sp
sub sp, 2
```

The gap could have been created with a dummy push, but the subtraction makes it clear that the space pushed is not

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1. The shift logical right operation inserts
2. After the execution of "PUSH AX" statement
3. The extended ASCII has 256 characters
4. **The iAPX88 processor supports _____ modes of memory access.**
5. In STOS instruction, the implied source will always be in AL or AX registers
6. The maximum memory, IAPX88 can access is _____.
7. The registers IP, SP, BP, SI, DI, and BX all can contain a _____ offset.
8. In the "mov ax, 5" 5 is the _____ operand.
9. In MUL instruction if the source operand is a word then it is multiplied by register
10. The prevalent and standard format for representation of characters in computers is
11. which bit sets the character "blinking" on the screen?
12. **"mov byte [num1], 5" is _____ instruction.**
13. _____ can process blocks of data in one go.
14. In string instructions, CX is always
15. STOS transfers a byte or word from register AL or AX to the string element addressed by
16. The execution of the instruction "mov word [ES : 0], 0x0741" will print character "A" on screen, color of the character will be
17. In A4FB:4872 Segment:offset pair the physical address is (both segment and offset are in hexadecimal): A9822
18. Which of the following operations relating to PUSH is true?
19. If the decimal number "35" is shifted by two bits to left, the new value will be _____
20. Which of the following flags will be affected by MOVS?B?
21. **Explain the function of rotate right (ROR) instruction**

The rotate right (ROR) and rotate through carry right (RCR) instructions shift all the bits toward less significant bit positions, except for the least-significant bit, which is rotated to the most-significant bit location

22. Why REP prefix is generally not used with LODS instruction?

The lods instruction is unique among the string instructions. We will never use a repeat prefix with this instruction. Because it copies the byte or word pointed at by ds:si into the al, ax, or eax register, after which it increments or decrements the si register by one, two, or four. Repeating this instruction via the repeat prefix would serve no purpose whatsoever since the accumulator register will be overwritten each time the lods instruction repeats. At the end of the repeat operation, the accumulator will contain the last value read from memory.

23. Write all steps of algorithm for printing number 352.

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In this technique the first digit printed is the right most one

Divide the number by base (10 in case of decimal)..The remainder after

first division was 3, after second division was 5 and after the third division

was 2.

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- The remainder is its right most digit
- Convert the digit to its ASCII representation
- Save this digit on stack
- If the quotient is non-zero repeat the whole process to get the next digit, otherwise stop.
- Pop digits one by one and print on screen left to right. Stack is a Last In First Out structure so if 3, 5, and 2 are pushed on it, 2, 5, and 3 will come out in this order.

24. What are the result after performing the instruction (each carry 1 marks)

1. **and ax,bx**
2. **or ax,bx**
3. **xor ax,bx**

Given that ax = 00110011 and bx = 00010001

25. Describe Local Variables?

A local variable is valid within the statement block in which it is defined and within any nested statement blocks, unless you redefine the variable within the statement block.

Local variables should be created when the subroutine is called and discarded afterwards. So that the space used by them can be reused for the local variables of another subroutine. They only have meaning inside the subroutine and no meaning outside it.

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It is important role of the stack to create local variables that are only needed while the subroutine is in execution and not afterwards. They should not take permanent space like global variables.

The most convenient place to store these variables is the stack. We need some special manipulation of the stack for this task. We need to produce a gap in the stack for our variables.

Are valid only for the duration of the SPL routine

Are reset to their initial values or to a value the user passes to the routine, each time the routine is executed

Cannot have default values

26. Explain the complete operation of Interrupt when it is generated.

Interrupt is the result of an INT instruction (software interrupt) or it is generated by an external hardware which passes the interrupt number by a different mechanism. The currently executing instruction is completed, the current value of FLAGS is pushed on the stack, then the current code segment is pushed, then the offset of the next instruction is pushed. After this it automatically clears the trap flag and the interrupt flag to disallow further interrupts until the current routine finishes. After this it loads the word at $nx4$ in IP and the word at $nx4+2$ in CS if interrupt n was generated. As soon as these values are loaded in CS and IP execution goes to the start of the interrupt handler. When the handler finishes its work it uses the IRET instruction to return to the caller. IRET pops IP, then CS, and then FLAGS. The original value of IF and TF is restored which re-enables further interrupts

Stack is a _____ that behaves in a first in last out manner.

- Program
- data structure
- Heap
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Foreground and background parameter will be

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- 32bits
- 16bits
- 8bits
- 4bits

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The clear screen operation initialize whole block of memory

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The prevalent convention in most high level languages is stack clearing by the

- Caller
- Callee
- RET
- Stack

After execution of JCXZ instruction CX will changed with flag affect.

- CF
- OF
- DF
- None of Above

Execution of the instruction “mov word [ES : 0], 0x0741” will print

- “A” appear on the top left of screen
- “A” appear on the top right of screen
- “A” appear on the center of screen
- “A” appear on the bottom left of screen

if contains decimal -2 and BX contains decimal 2 then after the execution of instructions:

CMP AX, BX

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JA label

- Jump will be taken
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- 70
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- White
- Red
- Black

Q#21 Mark 2

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Q#22 Mark 2

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making it a local variable at this time. The stack pointer will be decremented by an extra two bytes thereby producing a gap in which a word can reside. This gap will be used for our temporary, local, or automatic variable; however we name it. We can decrement it as much as we want producing the desired space, however

the decrement must be by an even number, as the unit of stack operation is a word. In our case we needed just one word. Also the most convenient position for this gap is immediately after saving the value of SP in BP. So that the same base pointer can be used to access the local variables as well; this time using negative offsets. The standard way to start a subroutine which needs to access parameters and has local variables is as under.

```
push bp
```

```
mov bp, sp
```

```
sub sp, 2
```

The gap could have been created with a dummy push, but the subtraction makes it clear that the value pushed is not important and the gap will be used for our local variable. Also gap of any size can be created in a single instruction with subtraction. The parameters can still be accessed at bp+4 and bp+6 and the swapflag can be accessed at bp-2. The subtraction in SP was after taking the snapshot; therefore BP is above the parameters but below the local variables. The parameters are therefore accessed using positive offsets from BP and the local variables are accessed using negative offsets.

Question No: 1 (Marks: 1) - Please choose one

To transfer control back the RET instruction take

- 1 argument
- 1 argument

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- 3 arguments
- **No arguments**

Question No: 2 (Marks: 1) - Please choose one

In STOSB instruction SI is decremented or incremented by

4

1

2

3

Question No: 3 (Marks: 1) - Please choose one

CMPS instruction subtracts the source location to the destination location.
Destination location always lies in

DS:SI

DS:DI

ES:SI

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ES:DI

Question No: 4 (Marks: 1) - Please choose one

Regarding assembler, which statement is true:

Assembler converts mnemonics to the corresponding OP CODE

- Assembler converts OP CODE to the corresponding mnemonics
- Assembler executes the assembly code all at once
- **Assembler executes the assembly code step by step**

Question No: 5 (Marks: 1) - Please choose one

If “BB” is the OP CODE of the instruction which states to “move a constant value to AX register”, the hexadecimal representation (Using little Endian notation) of the instruction “Mov AX,336” (“150” in hexadecimal number system) will be:

0xBB0150

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0x5001BB

0x01BB50

0xBB5001

Question No: 6 (Marks: 1) - Please choose one

In the instruction MOV AX, 5 the number of operands are

1

2

3

4

Question No: 7 (Marks: 1) - Please choose one

The maximum parameters a subroutine can receive (with the help of registers) are

6

7

8

9

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Question No: 8 (Marks: 1) - Please choose one

In assembly the CX register is used normally as a _____ register.

source

counter

index

pointer

Question No: 9 (Marks: 1) - Please choose one

All the addressing mechanisms in iAPX 8 8 return a number called _____ address .

effective

faulty

indirect

direct

Question No: 10 (Marks: 1) - Please choose one

When a 16 bit number is divided by an 8 bit number, the dividend will be in

AX

BX

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CX

DX

Question No: 11 (Marks: 1) - Please choose one

in Left-Shift-Operation the left most bit _____

will drop

will go into CF

Will come to the right most

will be always 1

Question No: 12 (Marks: 1) - Please choose one

Suppose the decimal number "35" after shifting its binary two bits to left, the new value becomes _____

35

70

140

17

Question No: 13 (Marks: 1) - Please choose one

When divide overflow occurs processor will be interrupted this type of interrupt is

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called

Hardware interrupt

Software interrupt

Processor exception

Logical interrupts

Question No: 14 (Marks: 1) - Please choose one

Which mathematical operation is dominant during the execution of SCAS instruction

Division

Multiplication

Addition

Subtraction

Question No: 15 (Marks: 1) - Please choose one

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After the execution of REP instruction CX will be decremented then which of the following flags will be affected?

CF

OF

DF

No flags will be affected

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Question No: 16 (Marks: 1) - Please choose one

_____ is one of the reasons due to which string instructions are used in 8088

Efficiency and accuracy

Reduction in code size and accuracy

Reduction in code size and speed

Reduction in code size and efficiency

Question No: 17 (Marks: 1)

Write any two control instructions.

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Question No: 18 (Marks: 1)

RET instruction take how many arguments

Question No: 19 (Marks: 2)

Explain the fuction of rotate right (ROR) instruction

Question No: 20 (Marks: 2)

Describe the PUSH function

Question No: 21 (Marks: 3)

Write down the names of four segment registers?

Question No: 22 (Marks: 3)

For what purpose "INT 4" is reserved?

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Question No: 23 (Marks: 5)

Given that $[BX+0x0100]$ $BX=0x0100$

$Ds=0xFFFF0$

Calculate the physical address

Question No: 1 (Marks: 1) - Please choose one

_____ The
physical address of the stack is obtained by

☒ **SS:SP combination**

☐ SS:SI combination

☒ **SS:SP combination**

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☐ ES:BP combination

☐ ES:SP combination

Question No: 2 (Marks: 1) - Please choose one

_____ After
the execution of instruction "RET "

☒ SP is incremented by 2

☒ SP is incremented by 2

☐ SP is decremented by 2

☐ SP is incremented by 1

☐ SP is decremented by 1

Question No: 3 (Marks: 1) - Please choose one

_____ The
second byte in the word designated for one screen location holds

☒ Character color on the screen

☐ The dimensions of the screen

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☐ Character position on the screen

☒ Character color on the screen

☐ ASCII code of the character

Question No: 4 (Marks: 1) - Please choose one

_____ REP
will always

☒ Decrement CX by 1

☐ Increment CX by 1

☐ Increment CX by 2

☒ Decrement CX by 1

☐ Decrement CX by 2

Question No: 5 (Marks: 1) - Please choose one

_____ The
basic function of SCAS instruction is to

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☐ Compare

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☐ Compare

Question No: 6 (Marks: 1) - Please choose one

Index registers are used to store _____

☐ Address

☐ Both data and addresses

Question No: 7 (Marks: 1) - Please choose one

_____ The bits of the _____ work independently and individually

☐ flags register

☐ index register

☐ base register

☐ flags register

☐ accumulator

Question No: 8 (Marks: 1) - Please choose one

_____ To convert any digit to its ASCII representation

☐ Add 0x30 in the digit

☐ Add 0x30 in the digit

☐ Subtract 0x30 from the digit

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☐ Add 0x61 in the digit

☐ Subtract 0x61 from the digit

Question No: 9 (Marks: 1) - Please choose one

When a 32 bit number is divided by a 16 bit number, the quotient is of

☐ 4 bits

Question No: 10 (Marks: 1) - Please choose one

When a 16 bit number is divided by an 8 bit number, the quotient will be in

☐ AL

☐ AX

☐ AL

☐ AH

☐ DX

Question No: 11 (Marks: 1) - Please choose one

Which mathematical operation is dominant during the execution of SCAS instruction

☐ Division

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Question No: 12 (Marks: 1) - Please choose one

_____ If AX contains decimal -2 and BX contains decimal 2 then after the execution of instructions:

CMP AX, BX

JA label

☒ Zero flag will set

☐ Jump will be taken

☒ Zero flag will set

☐ ZF will contain value -4

☐ Jump will not be taken

Question No: 13 (Marks: 1) - Please choose one

_____ The execution of the instruction "mov word [ES : 160], 0x1230" will print a character "0" on the screen at

☐ Second column of first row

☒ First column of second row

☐ Second column of second row

☐ First column of third row

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Question No: 14 (Marks: 1) - Please choose one

_____ If the direction of the processing of a string is from higher addresses towards lower addresses then

☐ ZF is cleared

☐ DF is cleared

☐ ZF is set

☒ DF is set

Question No: 15 (Marks: 1) - Please choose one

_____ The instruction ADC has _____ Operand(s)

☒ 3

☐ 0

☐ 1

☐ 2

☒ 3

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Question No: 16 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the red component of background color ?

☒ 3

☐ 3

☐ 4

☐ 5

☐ 6

Q=12

Int 13-bios disk service "generally uses which register to return the error flag?

-
- CF
 - DL
 - **AH**
 - AL
-

Q=13:

The first sector on the hard disk contains the

-
- Hard disk size
 - **Partition table**
 - Data size
 - Sector size
-

Q=14

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Operating system organize data in the form of

- Folder
 - Batch file
 - **File**
 - None of above
-

.....

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Q=15

In 9 pin db 9 connector, which pin is assigned to TD(transmitted data)

- 1
 - 2
 - 3
 - 4
-

Q=16"

Device derive can be divided into -----major categories.

- 5
 - 4
 - 3
 - 2
-

1. BL contains 5 decimal then after right shift , BL will become

- 3

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- 2.5
 - 5
 - 10
2. 8 * 16 font is stored in _____ bytes.
- 3
 - 4
 - 8
 - **16**
3. In DOS input buffer , number of characters actually read on return is stored in
- First byte
 - **Second byte**
 - Third byte
 - Fourth byte
4. IRQ 0 has priority
- Low
 - High
 - **Highest**
 - Medium
5. Thread registration code initialize PCB and add to linked list so that _____ will give it turn.
- Assembler
 - Linker
 - **Scheduler**
 - Debugger
6. Traditional calling conventions are in _____ number
- 1
 - **2**
 - 3
 - 4
7. VESA VEB 2.0 is standard for
- **High Resolution Mode**
 - Low Resolution Mode
 - Very High Resolution Mode
 - Medium Resolution Mode
8. To clear direction flag which instruction is used
- **Cld**
 - Clrd

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- Cl df
- Clr df

9. In STOSW instruction , When DI is cleared , SI is

- Incremented by 1
- **Incremented by 2**
- Decremented by 1
- Decremented by 2

10. Interrupt that is used in debugging with help of trap flag is

- INT 0
- **INT 1**
- INT 2
- INT 3

11. INT for arithmetic overflow is

- INT 1
- INT 2
- INT 3
- **INT 4**

12. IRQ referred as

- **Eight Input signals**
- One Input signal
- Eight Output signals
- One output signal

13. IRQ for keyboard is **1**

14. IRQ for sound card is **5**

15. IRQ for floppy disk is **6**

16. IRQ with highest priority is

- Keyboard IRQ
- **Timer IRQ**
- Sound Card
- Floppy Disk

17. Pin for parallel port ground is

- 10-18

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- **18-25**
 - 25-32
 - 32-39
18. The physical address of Interrupt Descriptor Table (IDT) is stored in
- GDTR
 - **IDTR**
 - IVT
 - IDTT
19. Execution of "RET 2" results in?
20. CX register is
- **Count register**
 - Data register
 - Index register
 - Base register
21. OUT instruction uses **AX** as source register.
22. IN DB-9 connector the Data Set ready pin is at
- 5
 - **6**
 - 7
 - 8
23. If two devices uses same IRQ then there is
- IRQ collision
 - **IRQ conflict**
 - IRQ drop
24. VESA organizes 16 bit color for every pixel in ratio
- 5:5:5
 - **5:6:5**
 - 6:5:6
 - 5:6:7
25. Division by zero is done by which interrupt.
- Interrupt 0.**

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Question No: 1 (Marks: 1) - Please choose one

_____ After
the execution of SAR instruction

▶ **The msb is replaced by a 0**

- ▶ The msb is replaced by 1
- ▶ The msb retains its original value
- ▶ The msb is replaced by the value of CF

Question No: 2 (Marks: 1) - Please choose one

_____ RETF
will pop the offset in the

▶ BP

▶ **IP**

▶ SP

▶ SI

Question No: 3 (Marks: 1) - Please choose one

_____ The
routine that executes in response to an INT instruction is called

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► **ISR**

► IRS

► ISP

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► IRT

Question No: 4 (Marks: 1) - Please choose one

_____ The first instruction of "COM" file must be at offset:

► 0x0010

► **0x0100**

► 0x1000

► 0x0000

Question No: 5 (Marks: 1) - Please choose one

_____ "Far" jump is not position relative but is _____

► memory dependent

► **Absolute**

► temporary

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- ▶ indirect

Question No: 6 (Marks: 1) - Please choose one

_____ Only
_____ instructions allow moving data from memory to memory.

▶ **string**

- ▶ word
- ▶ indirect
- ▶ stack

Question No: 7 (Marks: 1) - Please choose one

_____ After
the execution of instruction "RET 2"

▶ **SP is incremented by 2**

- ▶ SP is decremented by 2
- ▶ SP is incremented by 4
- ▶ SP is decremented by 4

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Question No: 8 (Marks: 1) - Please choose one

_____ DIV
instruction has

▶ **Two forms**

▶ Three forms

▶ Four forms

▶ Five forms

Question No: 9 (Marks: 1) - Please choose one

_____ DIV
When the operand of DIV instruction is of 16 bits then implied dividend will be of

▶ 8 bits

▶ 16 bits

▶ **32 bits**

▶ 64 bits

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Question No: 10 (Marks: 1) - Please choose one

_____ After
the execution of MOVS instruction which of the following registers are updated

► SI only

► DI only

► **SI and DI only**

► SI, DI and BP only

Question No: 11 (Marks: 1) - Please choose one

_____ In
8088 architecture, whenever an element is pushed on the stack

► SP is decremented by 1

► **SP is decremented by 2**

► SP is decremented by 3

► SP is decremented by 4

Question No: 12 (Marks: 1) - Please choose one

_____ When a very large number is divided by very small number so that the quotient is larger than the space provided, this is called

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▶ Divide logical error

▶ **Divide overflow error**

▶ Divide syntax error

▶ An illegal instruction

Question No: 13 (Marks: 1) - Please choose one

_____ In
the word designated for one screen location, the higher address contains

▶ **The character code**

- ▶ The attribute byte
- ▶ The parameters
- ▶ The dimensions

Question No: 14 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

▶ mov AX, 0xb008

mov ES, AX

▶ **mov AX, 0xb800**

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mov ES, AX

► mov AX, 0x8b00

mov ES, AX

► mov AX, 0x800b

mov ES, AX

Question No: 15 (Marks: 1) - Please choose one

_____ In a video memory, each screen location corresponds to

► One byte

► **Two bytes**

► Four bytes

► Eight bytes

Question No: 16 (Marks: 1) - Please choose one

_____ The execution of the instruction “mov word [ES : 0], 0x0741” will print character “A” on screen , background color of the screen will be

► **Black**

► White

► Red

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► Blue

Question No: 1 ____ (Marks: 1) - Please choose one

Which of the following is not true about registers?

1. Their operation is very much like memory
2. Intermediate results may also be stored in registers.
3. They are also called scratch pad ram
4. **None of given options.**

Question No: 2 ____ (Marks: 1) - Please choose one

move [bp], al moves the one byte content of the AL register to the address contained in BP register in the current

1. **Stack segment**
2. Code segment
3. Data segment
4. Extra segment

Question No: 3 (Marks: 1) - Please choose one

In a rotate through carry right (RCR) instruction applied on a 16 bit word
Effectively there is

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1. 16 bits rotation
2. 1 bit rotation
3. 17 bits rotation
4. 8 bits rotation

Question No: 4__ (Marks: 1) - Please

choose one The 8088 stack works on

1. Word sized elements
2. Byte sized elements
3. Double sized element
4. Nibble sized element

Question No: 5 (Marks: 1) - Please

choose one

An 8 x 16 font is stored in.....Bytes

1. 2
2. 4
3. 8
4. 16

Question No: 6 (Marks: 1) - Please

INT 10 is used for.....services.

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1. RAM
2. Disk
3. BIOS video
4. **DOS video**

Question No: 7 __ (Marks: 1) - Please choose one

Priority of IRQ 0 interrupt is

1. medium
2. high
3. **highest**
4. low

Question No: 8 __ (Marks: 1) - Please choose one

Threads can have function calls, parameters and _____variables.

1. global
2. **local**
3. legal
4. illegal

Question No: 9 __ (Marks: 1) - Please choose

one How many prevalent calling conventions do.....exist

1. 1
 2. 2
 3. 3
 4. 4
-

Question No: 10 (Marks: 1) - Please choose

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one In 9pin DB 9 DSR is assigned on pin number

1. 4
2. 5
3. 6
4. 7

Question No: 11

(Marks: 1) - Please

choose one In 9pin DB 9 CTS is assigned on pin
number

1. 6
2. 7
3. 8
4. 9

Question No: 12__ (Marks: 1) - Please choose one

In 9pin DB 9 CD is assigned on pin number

1. 1
2. 2
3. 3
4. 4

Question No: 13__ (Marks: 1) - Please choose one

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In 9pin DB 9 RD is assigned on pin number

- 1
- 2
- 3
- 4

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Question No: 14 __ (Marks: 1) - Please choose one

in device attribute word which of the following bit decides whether it is a character

1. device or a block device
2. Bit 12 Bit 13
3. Bit 14
4. Bit 15

Question No: 15__ (Marks: 1) - Please choose one

Video services are classified into _____ broad categories

- 2
- 3
- 4
- 5

Question No: 16 (Marks: 1) - Please choose

One

In STOSB instruction, when DF is clear, SI

is.....(wrong question) The implied source will always be in AL or AX. If DF is clear, DI will be

incremented by one or two depending of whether STOSB or STOSW is used.

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If DF is set DI will be decremented by one or two depending of whether STOSB or STOSW is used.....if we put DI here instead of SI again its confusing

1. Incremented by 1
2. **Incremented by 2**
3. Decrement by 1
4. Decrement by 2

Question No: 17 (Marks: 1) - Please choose one The

Process of sending signals back and forth is called

1. Activity
2. Hand-shaking
3. **Interruption**
4. Time clicking

Question No: 18 (Marks: 1) - Please choose one

which of the following is a special type of interrupt that returns to the same instruction instead of the next instruction

1. Divide overflow interrupt
2. Debug interrupt
3. Arithmetic overflow interrupt
4. Change of sign interrupt

Question No: 19 ____ (Marks: 1) - Please choose one

Which of the following IRQs is derived by a timer device?

1. **IRQ 0**
2. IRQ 1
3. IRQ 2

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4. IRQ 3

Question No: 20 __ (Marks: 1) - Please choose one

Which of the following interrupts is used for Arithmetic overflow

1. INT 1
2. INT 2
3. INT 3
4. INT 4

Question No: 21 __ (Marks: 1) - Please choose one

Which of the following IRQs is connected to serial port COM 2?

1. IRQ 0
2. IRQ 1
3. **IRQ 2**
4. IRQ 3

Question No: 22 __ (Marks: 1) - Please

choose one

An End of Interrupt (EOI) signal is sent by

1. Handler
2. Processor
3. IRQ
4. PIC

Question No: 23 __ (Marks: 1) - Please choose one

The source registers in OUT is

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1. AL or AX
 2. BL or BX
 3. CL or CX
 4. DL or DX
-

Question No: 24 (Marks: 1) - Please choose one

In programmable interrupt controller which of the following ports is used for selectively enabling or disabling interrupts

1. 19
 2. 20
 3. 21
 4. 22
-

Question No: 25 (Marks: 1) - Please choose one

The number of pins in a parallel port connector are?

1. 25
 2. 30
 3. 35
-

Question No: 26 (Marks: 1) - Please choose one

Which of the following pins of a parallel port connector are grounded?

1. 10-18
 2. 18-25
 3. 25-32
 4. 32-39
-

Question No: 27 ____ (Marks: 1) - Please choose one

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Suppose a decimal number 35 when its binary is shifted to write two places the new number will become

1. 35
2. 70
3. 140
4. 17

Question No: 28 __ (Marks: 1) - Please choose one

A 32bit address register can access upto of memory so memory access has increased a lot.

1. 2GB
2. 4GB
3. 6GB
4. 8GB

Question No: 29 __ (Marks: 1) - Please choose one

In NASM an imported symbol is declared with the while and exported symbol is declared with the

1. Global directive, External directive
2. External directive, Global directive
3. Home Directive, Foreign Directive
4. Foreign Directive, Home Directive

Question No: 30 (Marks: 1) - Please choose

one Single step interrupt is

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1. Hardware interrupt
2. Like divide by zero interrupt
3. Like divide by 1 interrupt
4. Software interrupt

Question No: 31 __ (Marks: 1)

Which services are gained by INT 0x16

Solution:

Hardware interrupt

Like divide by zero interrupt

Like divide by 1 interrupt

Software interrupt

Question No: 32 (Marks: 1

Give the name of any one VESA service

- Hardware interrupt
- Like divide by zero interrupt
- Like divide by 1 interrupt
- Software interrupt

Question No: 33 (Marks: 2)

INT 14 - SERIAL - READ CHARACTER FROM PORT

By using above port what do AH, AL and DX show here?

- Hardware interrupt

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- Like divide by zero interrupt
- Like divide by 1 interrupt
- Software interrupt

Question No: 34 (Marks: 2)

What do these instructions do ? write your answer in single line.

mov cx, 0xffff

loop \$

- Hardware interrupt
- Like divide by zero interrupt
- Like divide by 1 interrupt
- Software interrupt

Question No: 35 (Marks: 3)

Define the protected mode

Solution:

- Hardware interrupt
- Like divide by zero interrupt
- Like divide by 1 interrupt
- Software interrupt

Question No: 36 (Marks: 3)

Write a program in assembly language to disable keyboard interrupt using PIC mask register

Hint: Only five instructions are needed

Solution:

- Hardware interrupt
- Like divide by zero interrupt
- Like divide by 1 interrupt
- Software interrupt

Question No: 37 (Marks: 3)

Read the following passage carefully and fill the blanks with proper words.

Note: Don't rewrite the passage just write the words in same order.

"BIOS sees the disks as a combination of sectors, tracks, and....., as a raw storage device without concern to whether it is reading a file or directory.

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..... provides the simplest and most powerful interface to the storage medium. However this raw storage is meaningless to the user who needs to store his files and organize them into..... . "

Solution:

- Hardware interrupt
 - Like divide by zero interrupt
 - Like divide by 1 interrupt
 - Software interrupt
-

Question No: 1 (Marks: 1)

- Please choose one

Sun SPARC Processor has a fixed _____ instruction size.

1. 16bit
2. 32bit
3. 64bit
4. 20bit

Question No: 2 (Marks: 1)

- Please choose one

When the subprogram finishes, the _____ retrieves the return address from the stack and transfers control to that location.

1. RET instruction
2. CALL instruction
3. POP instruction
4. Jump instruction

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Question No: 3 (Marks: 1)

- Please choose one

A 32 bit address register can access upto _____ of memory.

- 1 GB
- 6 GB
- 4 GB
- 2 GB

Question No: 4 (Marks: 1)

- Please choose one

The value of a segment register when the processor is running under protected mode is called

1. segment descriptor
2. segment selector
3. global descriptor table
4. protected register

Question No: 5 (Marks: 1)

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- Please choose one

FS and GS are two _____ in protected mode.

1. segment registers
2. segment selectors
3. stack pointers
4. register pointers

Question No: 6 (Marks: 1)

- Please choose one

IRQ 0 interrupt have _____ priority

1. low
2. medium
3. highest
4. lowest

Question No: 7 (Marks: 1)

- Please choose one

IDT stands for _____.

1. interrupt descriptor table
2. individual descriptor table
3. inline data table
4. interrupt descriptor table

Question No: 8 (Marks: 1)

- Please choose one

Every bit of line status in serial port conveys _____ information.

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1. different
2. same
3. partial
4. full

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Question No: 9 (Marks: 1)

- Please choose one

There are total _____ bytes in a standard floppy disk.

1. 1444k
2. 1440k
3. 1280k
4. 2480k

Question No: 10 (Marks: 1)

- Please choose one

An 8x16 font is stored in _____ bytes.

- 8
- 16
- 4
- 20

=====

. Serial Port is also accessible via I/O ports , COM 1 is accessible via ports 3F8-3FF while COM 2 is accessible via 2F8 -2FF.

The first register at 3F8 is the Transmitter holding register if written to and the receiver buffer register if read from.

Other register of our interest include 3F9 whose Bit 0 must be set to enable received data available interrupt and Bit 1 must be set to enable transmitter holding register empty interrupt.

(Transmitter, COM 1, I/O ports , COM2. bit 0 , Buffer , 3FA)

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=====

Question # 1

There are three busses to communicate the processor and memory named as _____

- 1) : address bus.,data bus and data bus.
- 2) : addressing bus.,data bus and data bus.
- 3) : address bus.,datamove bus and data bus.
- 4) : address bus.,data bus and control bus..

Correct Option : 4 From : Lecture 1

Question # 2

The address bus is unidirectional and address always travels from processor to memory.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 1

Question # 3

Data bus is bidirectional because _____

- 1) : To way
- 2) : Data moves from both, processor to memory and memory to processor,
- 3) : Data moves from both, processor to memory and memory to data Bus,
- 4) : None of the Given

Correct Option : 3 From : Lecture 1

Question # 4

Control bus _____

- 1) : is Not Important.
- 2) : is Important .
- 3) : bidirectional.
- 4) : unidirectional .

Correct Option : 3 From : Lecture 1

Question # 5

A memory cell is an n-bit location to store data, normally _____ also called a byte

- 1) : 4-bit
- 2) : 8-bit
- 3) : 6-bit
- 4) : 80-bit

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Correct Option : 2 From : Lecture 1

Question # 6

The number of bits in a cell is called the cell width. _____ define the memory completely.

- 1) : Cell width and number of cells,
- 2) : cell number and width of the cells,
- 3) : width
- 4) : Height

Correct Option : 1 From : Lecture 1

Question # 7

for memory we define two dimensions. The first dimension defines how many _____ bits are there in a single memory cell.

- 1) : parallel
- 2) : Vertical
- 3) : long
- 4) : short

Correct Option : 1 From : Lecture 1

Question # 8

_____ operation requires the same size of data bus and memory cell width.

- 1) : Normal
- 2) : Best and simplest
- 3) : first
- 4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 9

Control bus is only the mechanism. The responsibility of sending the appropriate signals on the control bus to the memory is of the _____.

- 1) : Data Bus
- 2) : processor
- 3) : Address Bus
- 4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 10

In "total: dw 0 " Opcode total is a _____

- 1) : Literal
- 2) : Variable

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3) : Label

4) : Starting point

Correct Option : 3 From : Lecture 10

Question # 11

| 0 | --> | 1 | 1 | 0 | 1 | 0 | 0 | 0 | --> | C | is a example of _____

1) : Shl

2) : sar

3) : Shr

4) : Sal

Correct Option : 3 From : Lecture 10

Question # 12

| C | <-- | 1 | 1 | 0 | 1 | 0 | 0 | 0 | <-- | 0 | is a example of _____

1) : Shl

2) : sar

3) : Shr

4) : Sal

Correct Option : 1 From : Lecture 10

Question # 13

ADC has _____ operands.

1) : two

2) : three

3) : Five

4) : Zero

Correct Option : 2 From : Lecture 10

Question # 14

The basic purpose of a computer is to perform operations, and operations need

_____.

1) : order

2) : nothing

3) : operands

4) : bit

Correct Option : 3 From : Lecture 2

Question # 15

Registers are like a scratch pad ram inside the processor and their operation is very much like normal_____.

1) : Number

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- 2) : opeations
- 3) : memory cells
- 4) : None of the Given

Correct Option : 3 From : Lecture 2

Question # 16

There is a central register in every processor called the _____ and The word size of a processor is defined by the width of its_____.

- 1) : accumulator,accumulator
- 2) : data bus,accumulator
- 3) : accumulator, Address Bus
- 4) : accumulator,memory

Correct Option : 1 From : Lecture 2

Question # 17

_____does not hold data but holds the address of data

- 1) : Pointer, Segment, or Base Register
- 2) : Pointer, Index, or Base Register
- 3) : General Registers
- 4) : Instruction Pointer

Correct Option : 2 From : Lecture 2

Question # 18

"The program counter holds the address of the next instruction to be _____"

- 1) : executed.
- 2) : called
- 3) : deleted
- 4) : copy

Correct Option : 1 From : Lecture 2

Question # 19

There are _____ types of "instruction groups"

- 1) : 4
- 2) : 5
- 3) : 3
- 4) : 2

Correct Option : 1 From : Lecture 2

Question # 20

These instructions are used to move data from one place to another.

- 1) : TRUE

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2) : FALSE

3) :

4) :

Correct Option : 1 From : Lecture 2

Question # 21

"mov" instruction is related to the _____ *****.

1) : Arithmetic and Logic Instructions

2) : Data Movement Instructions

3) : Program Control Instructions

4) : Special Instructions

Correct Option : 2 From : Lecture 2

Question # 22

_____ allow changing specific processor behaviors and are used to play with it.

1) : Special Instructions

2) : Data Movement Instructions

3) : Program Control Instructions

4) : Arithmetic and Logic Instructions

Correct Option : 1 From : Lecture 2

Question # 23

8088 is a 16bit processor with its accumulator and all registers of _____.

1) : 32 bits

2) : 6 bits

3) : 16 bits

4) : 64 bits

Correct Option : 3 From : Lecture 2

Question # 24

The _____ of a processor means the organization and functionalities of the registers it contains and the instructions that are valid on the processor.

1) : Manufactures

2) : architecture

3) : Deal

4) : None of the Given

Correct Option : 2 From : Lecture 2

Question # 25

Intel IAPX88 Architecture is _____

1) : More then 25 old

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- 2) : New
- 3) : Not Good
- 4) : None of the Given

Correct Option : 1 From : Lecture 2

Question # 26

The iAPX88 architecture consists of _____ registers.

- 1) : 13
- 2) : 12
- 3) : 9
- 4) : 14

Correct Option : 4 From : Lecture 3

Question # 27

General Registers are _____

- 1) : AX, BX, CX, and DX
- 2) : XA, BX, CX, and DX
- 3) : SS, SI and DI
- 4) : 3

Correct Option : 1 From : Lecture 3

Question # 28

AX means we are referring to the extended 16bit "A" register. Its upper and lower byte are separately accessible as _____.

- 1) : AH and AL
- 2) : A Lower and A Upper
- 3) : AL, AU
- 4) : AX

Correct Option : 1 From : Lecture 3

Question # 29

AX is General purpose Register where A stands for _____.

- 1) : Acadmic
- 2) : Ado
- 3) : Architecture
- 4) : Accumulator

Correct Option : 4 From : Lecture 3

Question # 30

The B of BX stands for _____ because of its role in memory addressing.

- 1) : Busy

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- 2) : Base
- 3) : Better
- 4) : None of the Given

Correct Option : 2 From : Lecture 3

Question # 31

The D of DX stands for Destination as it acts as the destination in _____.

- 1) : I/O operations
- 2) : operations
- 3) : memory cells
- 4) : Memory I/O operations

Correct Option : 1 From : Lecture 3

Question # 32

The C of CX stands for Counter as there are certain instructions that work with an automatic count in the _____.

- 1) : DI register
- 2) : BX register
- 3) : CX register
- 4) : DX register

Correct Option : 3 From : Lecture 3

Question # 33

_____ are the index registers of the Intel architecture which hold address of data and used in memory access.

- 1) : SI and SS
- 2) : PI and DI
- 3) : SI and IP
- 4) : SI and DI

Correct Option : 4 From : Lecture 3

Question # 34

In Intel IAPX86 architecture _____ is the special register containing the address of the next instruction to be executed.

- 1) : AX
- 2) : PI
- 3) : IP
- 4) : SI

Correct Option : 3 From : Lecture 3

Question # 35

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SP is a memory pointer and is used indirectly by a set of _____.

- 1) : instructions
- 2) : Pointers
- 3) : Indexes
- 4) : Variables

Correct Option : 1 From : Lecture 3

Question # 36

_____ is also a memory pointer containing the address in a special area of memory called the stack.

- 1) : SP
- 2) : BP
- 3) : PB
- 4) : AC

Correct Option : 2 From : Lecture 3

Question # 37

_____ is bit wise significant and accordingly each bit is named separately.

- 1) : AX
- 2) : FS
- 3) : IP
- 4) : Flags Register

Correct Option : 4 From : Lecture 3

Question # 38

When two 16bit numbers are added the answer can be 17 bits long, this extra bit that won't fit in the target register is placed in the _____ where it can be used and tested

- 1) : carry flag
- 2) : Parity Flag
- 3) : Auxiliary Carry
- 4) : Zero Flag

Correct Option : 1 From : Lecture 3

Question # 39

Program is an ordered set of instructions for the processor.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 3

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Question # 40

For Intel Architecture “operation destination, source” is way of writing things.

- 1) : TRUE
- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 3

Question # 41

Operation code “ add ax, bx ” _____.

- 1) : Add the bx to ax and change the bx
- 2) : Add the ax to bx and change the ax
- 3) : Add the bx to ax and change the ax
- 4) : Add the bx to ax and change nothing

Correct Option : 3 From : Lecture 3

Question # 42

The maximum memory iAPX88 can access is _____.

- 1) : 1MB
- 2) : 2MB
- 3) : 3MB
- 4) : 128MB

Correct Option : 1 From : Lecture 4

Question # 43

The maximum memory iAPX88 can access is 1MB which can be accessed with _____.

- 1) : 18 bits
- 2) : 20 bits
- 3) : 16 bits
- 4) : 2 bits

Correct Option : 2 From : Lecture 4

Question # 44

_____ address of 1DED0 where the opcode B80500 is placed.

- 1) : physical memory
- 2) : memory
- 3) : efective
- 4) : None of the Given

Correct Option : 1 From : Lecture 4

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Question # 45

16 bit of Segment and Offset Addresses can be converted to 20bit Address i.e

Segment Address with lower four bits zero + Offset Address with _____ four bits zero = 20bit Physical Address

- 1) : Middle
- 2) : lower
- 3) : Top
- 4) : upper

Correct Option : 4 From : Lecture 4

Question # 46

When adding two 20bit Addresses a carry if generated is dropped without being stored anywhere and the phenomenon is called address_____.

- 1) : wraparound
- 2) : mode
- 3) : ping
- 4) : error

Correct Option : 1 From : Lecture 4

Question # 47

segments can only be defined a 16byte boundaries called _____ boundaries.

- 1) : segment
- 2) : paragraph
- 3) : Cell
- 4) : RAM

Correct Option : 1 From : Lecture 4

Question # 48

in a Program CS, DS, SS, and ES all had the same value in them. This is called _____.

- 1) : equal memory
- 2) : overlapping segments
- 3) : segments hidding
- 4) : overlapping SI

Correct Option : 2 From : Lecture 4

Question # 49

"db num1" size of the memory is _____

- 1) : 1byte
- 2) : 4bit
- 3) : 16bit

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4) : 2byte

Correct Option : 1 From : Lecture 5

Question # 50

“ 1-----[org 0x0100]

2-----mov ax, [num1] ; load first number in ax

3-----mov bx, [num2] ; load second number in bx

4-----add ax, bx _____

5-----int 0x21

6-----

7-----num1: dw 5

8-----num2: dw 10

Comments for the 4 are :

1) : No comments Will be

2) : ; accumulate sum in add

3) : ; accumulate sum in ax

4) : ; accumulate sum in Bx

Correct Option : 3 From : Lecture 5

Question # 51

In “ mov ax, bx ” is _____ Addressing Modes.

1) : Immediate

2) : Indirect

3) : Direct

4) : Register

Correct Option : 4 From : Lecture 5

Question # 52

In “mov ax, [bx] ” is _____ Addressing Modes

1) : Based Register Indirect

2) : Indirect

3) : Base Indirect

4) : Immediate

Correct Option : 1 From : Lecture 5

Question # 53

In “mov ax, 5 ” is _____ Addressing Modes

1) : Immediate

2) : Indirect

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3) : Indirect

4) : Register

Correct Option : 1 From : Lecture 6

Question # 54

In " mov ax, [num1+bx] " is _____ ADDRESSING

1) : OFFSET+ Indirect

2) : Register + Direct

3) : Indirect + Reference

4) : BASEd REGISTER + OFFSET

Correct Option : 4 From : Lecture 7

Question # 55

"base + offset addressing " gives This number which came as the result of addition is called the _____.

1) : Address

2) : mode

3) : effective address

4) : Physical Address

Correct Option : 3 From : Lecture 7

Question # 56

"mov ax, [cs:bx]" associates _____ for this one instruction

1) : CS with BX

2) : BX with CS

3) : BX with AX

4) : None of the Given

Correct Option : 2 From : Lecture 7

Question # 57

For example

BX=0100

DS=FFF0

And Opcode are;

move [bx+0x0100], Ax

now what is the effective memory address;

1) : 0020

2) : 0200

3) : 0300

4) : 0x02

Correct Option : 2 From : Lecture 7

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Question # 58

For example

BX=0100

DS=FFF0

And Opcode are;

move [bx+0x0100], Ax

now what is the physical memory address;

- 1) : 0020
- 2) : 0x0100
- 3) : 0x10100
- 4) : 0x100100

Correct Option : 2 From : Lecture 7

Question # 59

In " mov [1234], al " is _____ Addressing Modes.

- 1) : Immediate
- 2) : Indirect
- 3) : Direct
- 4) : Register

Correct Option : 3 From : Lecture 8

Question # 60

In " mov [SI], AX " is _____ Addressing Modes.

- 1) : Basef Register Indirect
- 2) : Indirect
- 3) : Indexed Register Indirect
- 4) : Immediate

Correct Option : 3 From : Lecture 8

Question # 61

In " mov ax, [bx - Si] " is _____ ADDRESSING

- 1) : Basef Register Indirect
- 2) : Indirect
- 3) : Direct
- 4) : illegal

Correct Option : 4 From : Lecture 8

Question # 62

In " mov ax, [BL] " there is error i.e. _____

- 1) : Address must be 16bit

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- 2) : Address must be 8bit
 - 3) : Address must be 4bit
 - 4) : 8 bit to 16 bit move illegal
- Correct Option : 4 From : Lecture 8

Question # 63

In " mov ax, [SI+DI] " there is error i.e. _____

- 1) : Two indexes can't use as Memory Address
- 2) : index can't use as Memory Address
- 3) : I don't Know
- 4) : None of the Given

Correct Option : 1 From : Lecture 8

Question # 64

In JNE and JNZ there is difference for only _____;

- 1) : Programmer or Logic
- 2) : Assembler
- 3) : Debugger
- 4) : IAPX88

Correct Option : 1 From : Lecture 9

Question # 65

JMP is Instruction that on executing take jump regardless of the state of all flags is called _____

- 1) : Jump
- 2) : Conditional jump
- 3) : Unconditional jump
- 4) : Stay

Correct Option : 3 From : Lecture 9

Question # 66

When result of the source subtraction from the destination is zero, zero flag is set i.e. ZF=1 its mean that;

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : DEST < SRC
- 4) : DEST > SRC

Correct Option : 1 From : Lecture 9

Question # 67

When an unsigned source is subtracted from an unsigned destination and the destination is

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smaller, borrow is needed which sets the _____.

- 1) : carry flag i.e CF = 0
- 2) : carry flag i.e CF = 1
- 3) : Carry Flag + ZF=1
- 4) : None of the Given

Correct Option : 2 From : Lecture 9

Question # 68

In the case of unassigned source and destination when subtracting and in the result ZF =1 OR CR=1 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST ? USRC
- 4) : DEST > SRC

Correct Option : 3 From : Lecture 9

Question # 69

In the case of unassigned source and destination when subtracting and in the result ZF =0 AND CR=0 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST < USRC
- 4) : UDEST > USRC

Correct Option : 4 From : Lecture 9

Question # 70

In the case of unassigned source and destination when subtracting and in the result CR=0 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST < USRC
- 4) : UDEST ? USRC

Correct Option : 4 From : Lecture 9

Question # 71

_____ This jump is taken if the last arithmetic operation produced a zero in its destination. After a CMP it is taken if both operands were equal.

- 1) : Jump if zero(JZ)/Jump if equal(JE)
- 2) : Jump if equal(JE)
- 3) : Jump if zero(JZ)
- 4) : No Jump for This

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Correct Option : 1 From : Lecture 9

Question # 72

_____ This jump is taken after a CMP if the unsigned source is smaller than or equal to the unsigned destination.

- 1) : JBE(Jump if not below or equal)
- 2) : JNA(Jump if not above)/JBE(Jump if not below or equal)
- 3) : JNA(Jump if not above)
- 4) : No Jump fot This

Correct Option : 2 From : Lecture 9

Question # 1

Numbers of any size can be added using a proper combination of _____.

- 1) : ADD and ADC
- 2) : ABD and ADC
- 3) : ADC and ADC
- 4) : None of the Given

Correct Option : 1 From : Lecture 11

Question # 2

Like addition with carry there is an instruction to subtract with borrows called_____.

- 1) : SwB
- 2) : SBB
- 3) : SBC
- 4) : SBBC

Correct Option : 2 From : Lecture 11

Question # 3

if "and ax, bx" instruction is given, There are _____ operations as a result

- 1) : 16 AND
- 2) : 17 AND
- 3) : 32 AND
- 4) : 8 AND

Correct Option : 1 From : Lecture 12

Question # 4

_____ can be used to check whether particular bits of a number are set or not.

- 1) : AND
- 2) : OR
- 3) : XOR
- 4) : NOT

Correct Option : 1 From : Lecture 12

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Question # 5

_____ can also be used as a masking operation to invert selective bits.

- 1) : AND
- 2) : OR
- 3) : XOR
- 4) : NOT

Correct Option : 3 From : Lecture 12

Question # 6

Masking Operations are Selective Bit _____

- 1) : Clearing, XOR, Inversion and Testing
- 2) : Clearing, Setting, Inversion and Testing
- 3) : Clearing, XOR, AND and Testing
- 4) : None of the Given

Correct Option : 2 From : Lecture 12

Question # 7

The _____ instruction allows temporary diversion and therefore reusability of code.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 1 From : Lecture 13

Question # 8

CALL takes a label as _____ and execution starts from that label,

- 1) : argument
- 2) : Lable
- 3) : TXt
- 4) : Register

Correct Option : 1 From : Lecture 13

Question # 9

When the _____ instruction is encountered and it takes execution back to the instruction following the CALL.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 2 From : Lecture 13

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Question # 10

_____ Both the instructions are commonly used as a pair, however technically they are independent in their operation.

- 1) : RET and ADC
- 2) : Cal and SSb
- 3) : CALL and RET
- 4) : ADC and SSB

Correct Option : 3 From : Lecture 13

Question # 11

The CALL mechanism breaks the thread of execution and does not change registers, except _____.

- 1) : SI
- 2) : IP
- 3) : DI
- 4) : SP

Correct Option : 2 From : Lecture 13

Question # 12

Stack is a _____ that behaves in a first in last out manner.

- 1) : Program
- 2) : data structure
- 3) : Heap
- 4) : None of the Given

Correct Option : 2 From : Lecture 14

Question # 13

If _____ is not available, stack clearing by the callee is a complicated process.

- 1) : CALL
- 2) : SBB
- 3) : RET n
- 4) : None of the Given

Correct Option : 3 From : Lecture 14

Question # 14

When the stack will eventually become full, SP will reach 0, and thereafter wraparound producing unexpected results. This is called stack _____

- 1) : Overflow
- 2) : Leakage
- 3) : Error

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4) : Pointer

Correct Option : 1 From : Lecture 14

Question # 15

The pop operation makes a copy from the top of the stack into its_____.

1) : Register

2) : operand

3) : RET n

4) : Pointer

Correct Option : 2 From : Lecture 14

Question # 16

_____decrements SP (the stack pointer) by two and then transfers a word from the source operand to the top of stack

1) : PUSH

2) : POP

3) : CALL

4) : RET

Correct Option : 1 From : Lecture 14

Question # 17

POP transfers the word at the current top of stack (pointed to by SP) to the destination operand and then _____ SP by two to point to the new top of stack.

1) : increments

2) : decrements

3) : ++

4) : --

Correct Option : 1 From : Lecture 14

Question # 18

The trick is to use the _____ and _____ operations and save the callers' value on the stack and recover it from there on return.

1) : POP, ADC

2) : CALL, RET

3) : CALL, RET n

4) : PUSH, POP

Correct Option : 4 From : Lecture 14

Question # 19

To access the arguments from the stack, the immediate idea that strikes is to _____ them off the stack.

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- 1) : PUSH
 - 2) : POP
 - 3) : CALL
 - 4) : Rrgister
- Correct Option : 2 From : Lecture 15

Question # 20

push bp

we are _____

- 1) : sending bp copy to stack
- 2) : making bp copy from stack
- 3) : pushing bp on the stack
- 4) : doing nothing

Correct Option : 3 From : Lecture 15

Question # 21

Local Variables means variables that are used within the _____

- 1) : Subroutine
- 2) : Program
- 3) : CALL
- 4) : Label

Correct Option : 1 From : Lecture 15

Question # 22

Standard ASCII has 128 characters with assigned numbers from _____.

- 1) : 1to 129
- 2) : 0 to 127
- 3) : 0 to 128
- 4) : None of the Given

Correct Option : 2 From : Lecture 16

Question # 23

When _____ is sent to the VGA card, it will turn pixels on and off in such a way that a visual representation of 'A' appears on the screen.

- 1) : 0x60
- 2) : 0x90
- 3) : 0x30
- 4) : 0x40

Correct Option : 4 From : Lecture 16

Question # 24

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Which bit is refer to the Blinking of foreground character

1) : 6

2) : 7

3) : 5

4) : 3

Correct Option : 2 From : Lecture 16

Question # 25

Which bit is refer to the Intensity component of foreground color

1) : 4

2) : 5

3) : 3

4) : 7

Correct Option : 3 From : Lecture 16

Question # 26

Which bit is refer to the Green component of background color

1) : 1

2) : 5

3) : 3

4) : 7

Correct Option : 2 From : Lecture 16

Question # 27

Which bit is refer to the Green component of foreground color

1) : 1

2) : 5

3) : 3

4) : 7

Correct Option : 1 From : Lecture 16

Question # 28

String can be indicate bye given

1) : db 0x61, 0x62, 0x63

2) : db 'a', 'b', 'c'

3) : db 'abc'

4) : All of the above

Correct Option : 4 From : Lecture 16

Question # 29

The first form divides a 32bit number in DX:AX by its 16bit operand and stores the

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_____ quotient in AX

1) : 16bit

2) : 17bit

3) : 32bit

4) : 64bit

Correct Option : 1 From : Lecture 17

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Question # 30

The _____ (division) used in the process is integer division and not floating point division.

1) : DIV instruction

2) : ADC instruction

3) : SSB instruction

4) : DIVI instruction

Correct Option : 1 From : Lecture 17

Question # 31

_____ (multiply) performs an unsigned multiplication of the source operand and the accumulator.

1) : Multi

2) : DIV

3) : MUL

4) : Move

Correct Option : 3 From : Lecture 18

Question # 32

The desired location on the screen can be calculated with the following formulae.

1) : $\text{location} = (\text{hypos} * 80 + \text{SP}) * 3$

2) : $\text{location} = (\text{hypos} * 80 + \text{slocation}) * 2$

3) : $\text{location} = (\text{hypos} * 80 + \text{epos}) * 2$

4) : None of the Given

Correct Option : 3 From : Lecture 18

Question # 33

To play with string there are 5 instructions that are _____

1) : STOS, LODS, CMPS, SCAS, and MOVS

2) : MUL, DIV, ADD, ADC and MOVE

3) : SSB, ADD, CMPS, ADC, and MOVS

4) : None of the Given

Correct Option : 1 From : Lecture 18

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Question # 34

_____ transfers a byte or word from register AL or AX to the string element addressed by ES:DI and updates DI to point to the next location.

- 1) : LODS
- 2) : STOS**
- 3) : SCAS
- 4) : MOVE

Correct Option : 2 From : Lecture 18

Question # 35

_____ transfers a byte or word from the source location DS:SI to AL or AX and updates SI to point to the next location.

- 1) : LODS**
- 2) : STOS
- 3) : SCAS
- 4) : MOVE

Correct Option : 1 From : Lecture 18

Question # 36

_____ compares a source byte or word in register AL or AX with the destination string element addressed by ES: DI and updates the flags.

- 1) : LODS
- 2) : STOS
- 3) : SCAS**
- 4) : MOVE

Correct Option : 3 From : Lecture 18

Question # 37

_____ repeat the following string instruction while the zero flag is set and REPNE or REPNZ repeat the following instruction while the zero flag is not set.

- 1) : REP or REPZ
- 2) : REPE or REPZ**
- 3) : REPE or RPZ
- 4) : RPE or REPZ

Correct Option : 2 From : Lecture 18

Question # 38

LES loads _____

- 1) : ES**
- 2) : DS
- 3) : PS

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4) : LS

Correct Option : 1 From : Lecture 20

Question # 39

LDS loads _____.

1) : ES

2) : DS

3) : PS

4) : LS

Correct Option : 2 From : Lecture 20

Question # 40

REP allows the instruction to be repeated _____ times allowing blocks of memory to be copied.

1) : DX

2) : CX

3) : BX

4) : AX

Correct Option : 2 From : Lecture 20

Question # 41

_____ pops IP, then CS, and then FLAGS.

1) : Ret n

2) : REZA

3) : REPE

4) : **IRET**

Correct Option : 4 From : Lecture 21

Question # 42

_____, Trap, Single step Interrupt

1) : INT 0

2) : INT 1

3) : INT 3

4) : INT 0

Correct Option : 2 From : Lecture 21

Question # 43

INT 2, NMI-Non Maskable Interrupt (option is not given)

1) : INT 0

2) : INT 1

3) : INT 3

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4) : INT 0

Correct Option : From : Lecture 21

Question # 44

To hook an interrupt we change the _____ corresponding to that interrupt.

1) : SX

2) : vector

3) : AX

4) : BX

Correct Option : 2 From : Lecture 22

=====

Question # 1

There are three busses to communicate the processor and memory named as _____

1) : address bus.,data bus and data bus.

2) : addressing bus.,data bus and data bus.

3) : address bus.,datamove bus and data bus.

4) : address bus.,data bus and control bus..

Correct Option : 4 From : Lecture 1

Question # 2

The address bus is unidirectional and address always travels from processor to memory.

1) : TRUE

2) : FALSE

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Correct Option : 1 From : Lecture 1

Question # 3

Data bus is bidirectional because _____

1) : To way

2) : Data moves from both, processor to memory and memory to processor,

3) : Data moves from both, processor to memory and memory to data Bus,

4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 4

Control bus _____

1) : is Not Important.

2) : is Important .

3) : bidirectional.

4) : unidirectional .

Correct Option : 3 From : Lecture 1

Question # 5

A memory cell is an n-bit location to store data, normally _____ also called a byte

1) : 4-bit

2) : 8-bit

3) : 6-bit

4) : 80-bit

Correct Option : 2 From : Lecture 1

Question # 6

The number of bits in a cell is called the cell width. _____
define the memory completely.

1) : Cell width and number of cells,

2) : cell number and width of the cells,

3) : width

4) : Height

Correct Option : 1 From : Lecture 1

Question # 7

for memory we define two dimensions. The first dimension defines how many _____ bits are there in a single memory cell.

1) : parallel

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2) : Vertical

3) : long

4) : short

Correct Option : 1 From : Lecture 1

Question # 8

_____ operation requires the same size of data bus and memory cell width.

1) : Normal

2) : Best and simplest

3) : first

4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 9

Control bus is only the mechanism. The responsibility of sending the appropriate signals on the control bus to the memory is of the _____.

1) : Data Bus

2) : processor

3) : Address Bus

4) : None of the Given

Correct Option : 2 From : Lecture 1

Question # 10

In "total: dw 0 " Opcode total is a _____

1) : Literal

2) : Variable

3) : Label

4) : Starting point

Correct Option : 3 From : Lecture 10

Question # 11

| 0 | --> | 1 | 1 | 0 | 1 | 0 | 0 | 0 | --> | C | is a example of _____

1) : Shl

2) : sar

3) : Shr

4) : Sal

Correct Option : 3 From : Lecture 10

Question # 12

| C | <--> | 1 | 1 | 0 | 1 | 0 | 0 | 0 | <--> | 0 | is a example of _____ **(sar can also be fix here as it is the other name of shl)**

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1) : Shl

2) : sar

3) : Shr

4) : Sal

Correct Option : 1 From : Lecture 10

Question # 13

ADC has _____ operands.

1) : two

2) : three

3) : Five

4) : Zero

Correct Option : 2 From : Lecture 10

Question # 14

The basic purpose of a computer is to perform operations, and operations need _____.

1) : order

2) : nothing

3) : operands

4) : bit

Correct Option : 3 From : Lecture 2

Question # 15

Registers are like a scratch pad ram inside the processor and their operation is very much like normal _____.

1) : Number

2) : ooperations

3) : memory cells

4) : None of the Given

Correct Option : 3 From : Lecture 2

Question # 16

There is a central register in every processor called the _____ and

The word size of a processor is defined by the width of its _____.

1) : accumulator, accumulator

2) : data bus, accumulator

3) : accumulator, Address Bus

4) : accumulator, memory

Correct Option : 1 From : Lecture 2

Question # 17

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_____ does not hold data but holds the address of data

1) : Pointer, Segment, or Base Register

2) : Pointer, Index, or Base Register

3) : General Registers

4) : Instruction Pointer

Correct Option : 2 From : Lecture 2

Question # 18

"The program counter holds the address of the next instruction to be _____"

1) : executed.

2) : called

3) : deleted

4) : copy

Correct Option : 1 From : Lecture 2

Question # 19

There are _____ types of "instruction groups"

1) : 4

2) : 5

3) : 3

4) : 2

Correct Option : 1 From : Lecture 2

Question # 20

These instructions are used to move data from one place to another.

1) : TRUE

2) : FALSE

3) :

4) :

Correct Option : 1 From : Lecture 2

Question # 21

"mov" instruction is related to the _____ Group.

1) : Arithmetic and Logic Instructions

2) : Data Movement Instructions

3) : Program Control Instructions

4) : Special Instructions

Correct Option : 2 From : Lecture 2

Question # 22

_____ allow changing specific processor behaviors and are used to play with it.

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1) : Special Instructions

- 2) : Data Movement Instructions
- 3) : Program Control Instructions
- 4) : Arithmetic and Logic Instructions

Correct Option : 1 From : Lecture 2

Question # 23

8088 is a 16bit processor with its accumulator and all registers of _____.

- 1) : 32 bits
- 2) : 6 bits

3) : 16 bits

- 4) : 64 bits

Correct Option : 3 From : Lecture 2

Question # 24

The _____ of a processor means the organization and functionalities of the registers it contains and the instructions that are valid on the processor.

- 1) : Manufactures

2) : architecture

- 3) : Deal
- 4) : None of the Given

Correct Option : 2 From : Lecture 2

Question # 25

Intel IAPX88 Architecture is _____

1) : More then 25 old

- 2) : New
- 3) : Not Good
- 4) : None of the Given

Correct Option : 1 From : Lecture 2

Question # 26

The iAPX88 architecture consists of _____ registers.

- 1) : 13
- 2) : 12
- 3) : 9

4) : 14

Correct Option : 4 From : Lecture 3

Question # 27

General Registers are _____

1) : AX, BX, CX, and DX

- 2) : XA, BX, CX, and DX

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3) : SS, SI and DI

4) : 3

Correct Option : 1 From : Lecture 3

Question # 28

AX means we are referring to the extended 16bit "A" register. Its upper and lower byte are separately accessible as _____.

1) : AH and AL

2) : A Lower and A Upper

3) : AL, AU

4) : AX

Correct Option : 1 From : Lecture 3

Question # 29

AX is General purpose Register where A stands for _____.

1) : Academic

2) : Ado

3) : Architecture

4) : Accumulator

Correct Option : 4 From : Lecture 3

Question # 30

The B of BX stands for _____ because of its role in memory addressing.

1) : Busy

2) : Base

3) : Better

4) : None of the Given

Correct Option : 2 From : Lecture 3

Question # 31

The D of DX stands for Destination as it acts as the destination in _____.

1) : I/O operations

2) : operations

3) : memory cells

4) : Memory I/O operations

Correct Option : 1 From : Lecture 3

Question # 32

The C of CX stands for Counter as there are certain instructions that work with an automatic count in the _____.

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- 1) : DI register
- 2) : BX register
- 3) : CX register**
- 4) : DX register

Correct Option : 3 From : Lecture 3

Question # 33

_____ are the index registers of the Intel architecture which hold address of data and used in memory access.

- 1) : SI and SS
- 2) : PI and DI
- 3) : SI and IP
- 4) : SI and DI**

Correct Option : 4 From : Lecture 3

Question # 34

In Intel IAPX88 architecture _____ is the special register containing the address of the next instruction to be executed.

- 1) : AX
- 2) : PI
- 3) : IP**
- 4) : SI

Correct Option : 3 From : Lecture 3

Question # 35

SP is a memory pointer and is used indirectly by a set of _____.

- 1) : instructions**
- 2) : Pointers
- 3) : Indexes
- 4) : Variables

Correct Option : 1 From : Lecture 3

Question # 36

_____ is also a memory pointer containing the address in a special area of memory called the stack.

- 1) : SP**
- 2) : BP
- 3) : PB
- 4) : AC

Correct Option : 1 From : Lecture 3

Question # 37

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_____ is bit wise significant and accordingly each bit is named separately.

- 1) : AX
- 2) : FS
- 3) : IP

4) : Flags Register

Correct Option : 4 From : Lecture 3

Question # 38

When two 16bit numbers are added the answer can be 17 bits long, this extra bit that won't fit in the target register is placed in the _____ where it can be used and tested

1) : carry flag

- 2) : Parity Flag
- 3) : Auxiliary Carry
- 4) : Zero Flag

Correct Option : 1 From : Lecture 3

Question # 39

Program is an ordered set of instructions for the processor.

1) : TRUE

- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 3

Question # 40

For Intel Architecture "operation destination, source" is way of writing things.

1) : TRUE

- 2) : FALSE
- 3) :
- 4) :

Correct Option : 1 From : Lecture 3

Question # 41

Operation code " add ax, bx " _____.

- 1) : Add the bx to ax and change the bx
- 2) : Add the ax to bx and change the ax
- 3) : Add the bx to ax and change the ax**
- 4) : Add the bx to ax and change nothing

Correct Option : 3 From : Lecture 3

Question # 42

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The maximum memory iAPX88 can access is_____.

1) : 1MB

2) : 2MB

3) : 3MB

4) : 128MB

Correct Option : 1 From : Lecture 4

Question # 43

The maximum memory iAPX88 can access is 1MB which can be accessed with _____.

1) : 18 bits

2) : 20 bits

3) : 16 bits

4) : 2 bits

Correct Option : 2 From : Lecture 4

Question # 44

_____ address of 1DED0 where the opcode B80500 is placed.

1) : physical memory

2) : memory

3) : efective

4) : None of the Given

Correct Option : 1 From : Lecture 4

Question # 45

16 bit of Segment and Offset Addresses can be converted to 20bit Address i.e

Segment Address with lower four bits zero + Offset Address with _____

four bits zero = 20bit Physical Address

1) : Middle

2) : lower

3) : Top

4) : upper

Correct Option : 4 From : Lecture 4

Question # 46

When adding two 20bit Addresses a carry if generated is dropped without being stored anywhere and the phenomenon is called address_____.

1) : wraparound

2) : mode

3) : ping

4) : error

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Correct Option : 1 From : Lecture 4

Question # 47

segments can only be defined a 16byte boundaries called _____ boundaries.

1) : segment

2) : paragraph

3) : Cell

4) : RAM

Correct Option : 2 From : Lecture 4

Question # 48

in a Program CS, DS, SS, and ES all had the same value in them. This is called _____.

1) : equal memory

2) : overlapping segments

3) : segments hidding

4) : overlapping SI

Correct Option : 2 From : Lecture 4

Question # 49

"db num1" size of the memory is _____

1) : 1byte

2) : 4bit

3) : 16bit

4) : 2byte

Correct Option : 1 From : Lecture 5

Question # 50

1-----[org 0x0100]

2-----mov ax, [num1] ; load first number in ax

3-----mov bx, [num2] ; load second number in bx

4-----add ax, bx _____

5-----int 0x21

6-----

7-----num1: dw 5

8-----num2: dw 10

Comments for the 4 are :

1) : No comments Will be

2) : ; accumulate sum in add

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3) : ; accumulate sum in ax

4) : ; accumulate sum in Bx

Correct Option : 3 From : Lecture 5

Question # 51

In " mov ax, bx " is _____ Addressing Modes.

1) : Immediate

2) : Indirect

3) : Direct

4) : Register

Correct Option : 4 From : Lecture 5

Question # 52

In "mov ax, [bx] " is _____ Addressing Modes

1) : Based Register Indirect

2) : Indirect

3) : Base Indirect

4) : Immediate

Correct Option : 1 From : Lecture 5

Question # 53

In "mov ax, 5 " is _____ Addressing Modes

1) : Immediate

2) : Indirect

3) : Indirect

4) : Register

Correct Option : 2 From : Lecture 6

Question # 54

In " mov ax, [num1+bx] " is _____ ADDRESSING

1) : OFFSET+ Indirect

2) : Register + Direct

3) : Indirect + Reference

4) : BASEd REGISTER + OFFSET

Correct Option : 4 From : Lecture 7

Question # 55

"base + offset addressing " gives This number which came as the result of addition is called the _____.

1) : Address

2) : mode

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3) : effective address

4) : Physical Address

Correct Option : 3 From : Lecture 7

Question # 56

“mov ax, [cs:bx]” associates _____ for this one instruction

1) : CS with BX

2) : BX with CS

3) : BX with AX

4) : None of the Given

Correct Option : 2 From : Lecture 7

Question # 57

For example

BX=0100

DS=FFF0

And Opcode are;

move [bx+0x0100], Ax

now what is the effective memory address;

1) : 0020

2) : 0200

3) : 0300

4) : 0x02

Correct Option : 2 From : Lecture 7

Question # 58

For example

BX=0100

DS=FFF0

And Opcode are;

move [bx+0x0100], Ax

now what is the physical memory address;

1) : 0020

2) : 0x0100

3) : 0x10100

4) : 0x100100

Correct Option : 2 From : Lecture 7

Question # 59

In “ mov [1234], al ” is _____ Addressing Modes.

1) : Immediate

2) : Indirect

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- 3) : Direct
- 4) : Register

Correct Option : 3 From : Lecture 8

Question # 60

In " mov [SI], AX " is _____ Addressing Modes.

- 1) : Basef Register Indirect
- 2) : Indirect
- 3) : Indexed Register Indirect
- 4) : Immediate

Correct Option : 3 From : Lecture 8

Question # 61

In " mov ax, [bx - Si] " is _____ ADDRESSING

- 1) : Basef Register Indirect
- 2) : Indirect
- 3) : Direct
- 4) : illegal

Correct Option : 4 From : Lecture 8

Question # 62

In " mov ax, [BL] " there is error i.e. _____

- 1) : Address must be 16bit
- 2) : Address must be 8bit
- 3) : Address must be 4bit
- 4) : 8 bit to 16 bit move illegal

Correct Option : 4 From : Lecture 8

Question # 63

In " mov ax, [SI+DI] " there is error i.e. _____

- 1) : Two indexes can't use as Memory Address
- 2) : index can't use as Memory Address
- 3) : I don't Know
- 4) : None of the Given

Correct Option : 1 From : Lecture 8

Question # 64

In JNE and JNZ there is difference for only _____;

- 1) : Programmer or Logic
- 2) : Assembler
- 3) : Debugger

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4) : IAPX88

Correct Option : 1 From : Lecture 9

Question # 65

JMP is Instruction that on executing take jump regardless of the state of all flags is called _____

- 1) : Jump
- 2) : Conditional jump
- 3) : Unconditional jump
- 4) : Stay

Correct Option : 3 From : Lecture 9

Question # 66

When result of the source subtraction from the destination is zero, zero flag is set i.e. ZF=1
its mean that;

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : DEST < SRC
- 4) : DEST > SRC

Correct Option : 1 From : Lecture 9

Question # 67

When an unsigned source is subtracted from an unsigned destination and the destination is smaller, borrow is needed which sets the _____.

- 1) : carry flag i.e CF = 0
- 2) : carry flag i.e CF = 1
- 3) : Carry Flag + ZF=1
- 4) : None of the Given

Correct Option : 2 From : Lecture 9

Question # 68

In the case of unassigned source and destination when subtracting and in the result ZF =1 OR CR=1 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST ? USRC
- 4) : DEST > SRC

Correct Option : 3 From : Lecture 9

Question # 69

In the case of unassigned source and destination when subtracting and in the result ZF =0 AND CR=0 then _____

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- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST < USRC
- 4) : UDEST > USRC

Correct Option : 4 From : Lecture 9

Question # 70

In the case of unassigned source and destination when subtracting and in the result CR=0 then _____

- 1) : DEST = SRC
- 2) : DEST != SRC
- 3) : UDEST < USRC
- 4) : UDEST ? USRC

Correct Option : 4 From : Lecture 9

Question # 71

_____ This jump is taken if the last arithmetic operation produced a zero in its destination. After a CMP it is taken if both operands were equal.

- 1) : Jump if zero(JZ)/Jump if equal(JE)
- 2) : Jump if equal(JE)
- 3) : Jump if zero(JZ)
- 4) : No Jump fot This

Correct Option : 1 From : Lecture 9

Question # 72

_____ This jump is taken after a CMP if the unsigned source is smaller than or equal to the unsigned destination.

- 1) : JBE(Jump if not below or equal)
- 2) : JNA(Jump if not above)/JBE(Jump if not below or equal)
- 3) : JNA(Jump if not above)
- 4) : No Jump fot This

Correct Option : 2 From : Lecture 9

Question # 73

Numbers of any size can be added using a proper combination of _____.

- 1) : ADD and ADC
- 2) : ABD and ADC
- 3) : ADC and ADC
- 4) : None of the Given

Correct Option : 1 From : Lecture 11

Question # 74

Like addition with carry there is an instruction to subtract with borrows called _____.

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1) : SwB

2) : SBB

3) : SBC

4) : SBBC

Correct Option : 2 From : Lecture 11

Question # 75

if "and ax, bx" instruction is given, There are _____ operations as a result

1) : 16 AND

2) : 17 AND

3) : 32 AND

4) : 8 AND

Correct Option : 1 From : Lecture 12

Question # 76

_____ can be used to check whether particular bits of a number are set or not.

1) : AND

2) : OR

3) : XOR

4) : NOT

Correct Option : 1 From : Lecture 12

Question # 77

_____ can also be used as a masking operation to invert selective bits.

1) : AND

2) : OR

3) : XOR

4) : NOT

Correct Option : 3 From : Lecture 12

Question # 78

Masking Operations are Selective Bit _____

1) : Clearing, XOR, Inversion and Testing

2) : Clearing, Setting, Inversion and Testing

3) : Clearing, XOR, AND and Testing

4) : None of the Given

Correct Option : 2 From : Lecture 12

Question # 79

The _____ instruction allows temporary diversion and therefore

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reusability of code.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 1 From : Lecture 13

Question # 80

CALL takes a label as _____ and execution starts from that label,

- 1) : argument
- 2) : Lable
- 3) : TXt
- 4) : Register

Correct Option : 1 From : Lecture 13

Question # 81

When the _____ instruction is encountered and it takes execution back to the instruction following the CALL.

- 1) : CALL
- 2) : RET
- 3) : AND
- 4) : XOR

Correct Option : 2 From : Lecture 13

Question # 82

_____ Both the instructions are commonly used as a pair, however technically they are independent in their operation.

- 1) : RET and ADC
- 2) : Cal and SSb
- 3) : CALL and RET
- 4) : ADC and SSB

Correct Option : 3 From : Lecture 13

Question # 83

The CALL mechanism breaks the thread of execution and does not change registers, except _____.

- 1) : SI
- 2) : IP
- 3) : DI
- 4) : SP

Correct Option : 2 From : Lecture 13

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Question # 84

Stack is a _____ that behaves in a first in last out manner.

- 1) : Program
- 2) : data structure
- 3) : Heap
- 4) : None of the Given

Correct Option : 2 From : Lecture 14

Question # 85

If _____ is not available, stack clearing by the callee is a complicated process.

- 1) : CALL
- 2) : SBB
- 3) : RET n
- 4) : None of the Given

Correct Option : 3 From : Lecture 14

Question # 86

When the stack will eventually become full, SP will reach 0, and thereafter wraparound producing unexpected results. This is called stack _____

- 1) : Overflow
- 2) : Leakage
- 3) : Error
- 4) : Pointer

Correct Option : 1 From : Lecture 14

Question # 87

The pop operation makes a copy from the top of the stack into its _____.

- 1) : Register
- 2) : operand
- 3) : RET n
- 4) : Pointer

Correct Option : 2 From : Lecture 14

Question # 88

_____ decrements SP (the stack pointer) by two and then transfers a word from the source operand to the top of stack

- 1) : PUSH
- 2) : POP

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3) : CALL

4) : RET

Correct Option : 1 From : Lecture 14

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Question # 89

POP transfers the word at the current top of stack (pointed to by SP) to the destination operand and then _____ SP by two to point to the new top of stack.

1) : increments

2) : decrements

3) : ++

4) : --

Correct Option : 1 From : Lecture 14

Question # 90

The trick is to use the _____ and _____ operations and save the callers' value on the stack and recover it from there on return.

1) : POP, ADC

2) : CALL, RET

3) : CALL, RET n

4) : PUSH, POP

Correct Option : 4 From : Lecture 14

Question # 91

To access the arguments from the stack, the immediate idea that strikes is to _____ them off the stack.

1) : PUSH

2) : POP

3) : CALL

4) : Register

Correct Option : 2 From : Lecture 15

Question # 92

push bp

we are _____

1) : sending bp copy to stack

2) : making bp copy from stack

3) : pushing bp on the stack

4) : doing nothing

Correct Option : 3 From : Lecture 15

Question # 93

Local Variables means variables that are used within the _____

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1) : Subroutine

2) : Program

3) : CALL

4) : Label

Correct Option : 1 From : Lecture 15

Question # 94

Standard ASCII has 128 characters with assigned numbers from _____.

1) : 1 to 129

2) : 0 to 127

3) : 0 to 128

4) : None of the Given

Correct Option : 2 From : Lecture 16

Question # 95

When _____ is sent to the VGA card, it will turn pixels on and off in such a way that a visual representation of 'A' appears on the screen.

1) : 0x60

2) : 0x90

3) : 0x30

4) : 0x40

Correct Option : 4 From : Lecture 16

Question # 96

Which bit is refer to the Blinking of foreground character

1) : 6

2) : 7

3) : 5

4) : 3

1. Assembly language is not a low level language.

a. True

b. False

2. In case of COM File first command parameter is stored at _____ offset of program segment prefix.

a. 0x80 (Not Confirm)

b. 0x82

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- c. 0x84
- d. 0x86

3. Address always goes from

- a. Processor to memory
- b. Memory to processor**
- c. Memory to memory
- d. None of the above

4. The source register in OUT is

- a. AL or AX**
- b. BL or BX
- c. CL or CX
- d. DL or DX

5. By default CS is associated with

- a. SS
- b. BP
- c. CX
- d. IP**

6. Which of the following pins of parallel port are grounded

- a. 10-18
- b. 18-25**
- c. 25-32
- d. 32-39

7. In the instruction mov word [es:160], 0x1230, 30 represents the character

- a. A**
- b. B
- c. 0
- d. 1

8. On executing 0x21 0x3D, if file can't be opened then

- a. CF will contain 1**
- b. CF will contain 0
- c. ZF will contain 1
- d. ZF will contain 0

9. Which of the following IRQ is cascading interrupt

- a. IRQ 0

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- b. IRQ 1
- c. IRQ 2**
- d. IRQ 3

10. The execution of instruction mov word [es:160], 0x1230, will print a character on the screen at

- a. First column of second row
- b. Second column of first row
- c. Second column of second row
- d. First column of third row**

One screen location corresponds to a

Byte

Word

Double byte

Double word

After the execution of “PUSH AX” statement

AX register will reside on the stack

A copy of AX will go on the stack

The value of AX disappear after moving on stack

Stack will send an acceptance message

physical address of the stack is obtained by

SS:SP combination

SS:SI combination

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SS:SP combination

ES:BP combination

ES:SP combination

If the address of memory location Num1 is 0117 and its content is 0005 then after execution of the instruction “ mov bx, Num1” bx will contain

0005

0117

Num1

1701

In STOS instruction, the implied source will always be in

AL or AX registers

DL or DX registers

BL or BX registers

CL or CX registers

The shift logical right operation inserts

A zero at right

A zero at left

A one at right

A one at right

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REP will always

Increment CX by 1

Increment CX by 2

Decrement CX by 1

Decrement CX by 2

When an item is pushed on the decrementing stack, the top of the stack is

First decremented and then element copied on to the stack

First incremented and then element copied on to the stack

Decrement after the element copied on to the stack

Incremented after the element copied on to the stack

assembly the CX register is used normally as a _____ register.

source

counter

index

pointer

Which is the unidirectional bus ?

(I) Control Bus

(II) Data Bus

(III) Address Bus

I only

II only

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III only

I and II only

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The basic function of SCAS instruction is to

Compare

Scan

Sort

Move data

_____ register holds the address of next instruction is to be executed

Base pointer

Program counter

JC and JNC test the _____ flag.

carry

In string manipulation whenever an instruction needs a memory source, which of the following will hold the pointer to it?

ES: DI

which bit sets the character "blinking" on the screen?

7

If we want to divide a signed number by 2, this operation can better be accomplished by

SAR

After the execution of STOSWB, the CX will be.....

Decrement by 1

Each screen location corresponds to a word, the lower byte of this word contains ____

The character code

In a video memory, each screen location corresponds to

Two bytes

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ASSEMBLY LANGUAGE (CS401)

MID TERM MEGA FILE

SOLVED BY

VU HELPER

❖ Suppose AL contains 5 decimal then after two left shifts produces the value as

- ▶ 5
- ▶ **10**
- ▶ 15
- ▶ 20

❖ In STOS instruction, the implied source will always be in

- ▶ **AL or AX registers**
- ▶ DL or DX registers
- ▶ BL or BX registers
- ▶ CL or CX registers

❖ After the execution of STOSW the CX will be

- ▶ **Decrement by 1**
- ▶ Decrement by 2
- ▶ Increment by 1
- ▶ Increment by 2

❖ The basic function of SCAS instruction is to

- ▶ Compare
- ▶ **Scan (Pending)**
- ▶ Sort
- ▶ Move data

❖ Which is the unidirectional bus ?

- (I) Control Bus
- (II) Data Bus
- (III) Address Bus

- | | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ▶ ☐ I only |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ▶ ☐ II only |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ▶ ☒ III only |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ▶ ☐ I and II only |

❖ The operation of CMP is to

- | | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ▶ Subtract Source from Destination |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ▶ Subtract Destination to from Source |
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ▶ Add 1 to the Destination |

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ Add Source and Destination

Question No: 7 (Marks: 1) - Please choose one

The registers IP, SP, BP, SI, DI, and BX all can contain a _____offset.

- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ 8-bit
- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ 16-bit
- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ 32-bit
- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ 64-bit

Question No: 8 (Marks: 1) - Please choose one

In assembly the CX register is used normally as a _____register.

- ▶ source
- ▶ **counter**
- ▶ index
- ▶ pointer

Question No: 9 (Marks: 1) - Please choose one

All the addressing mechanisms in iAPX88 return a number called _____ address.

- ▶ **effective**
- ▶ faulty
- ▶ indirect
- ▶ direct

Question No: 10 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the blue component of foreground color

- ▶ 3
- ▶ 2
- ▶ 1
- ▶ **0**

Question No: 11 (Marks: 1) - Please choose one

When a 32 bit number is divided by a 16 bit number, the quotient will be stored in

- ▶ **AX**
- ▶ BX
- ▶ CX
- ▶ DX

Question No: 12 (Marks: 1) - Please choose one

“mov byte [num1], 5” is _____ instruction.

- ▶ **legal**
- ▶ illegal
- ▶ stack based
- ▶ memory indirect

Question No: 13 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

- ▶ mov AX, 0xb008
mov ES, AX
- ▶ **mov AX, 0xb800**
mov ES, AX
- ▶ mov AX, 0x8b00

mov ES, AX
▶ mov AX, 0x800b
mov ES, AX

Question No: 14 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES : 0], 0x0741” will print character “A” on screen, color of the character will be

- ▶ Black
- ▶ **White**
- ▶ Red
- ▶ Blue

Question No: 15 (Marks: 1) - Please choose one

Which of the following flags will be affected by MOVSW?

- ▶ DF
- ▶ PF
- ▶ ZF
- ▶ **No effect on flags**

Question No: 16 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the blue component of background color ?

- ▶ 3
- ▶ **4**
- ▶ 5
- ▶ 6

Question No: 1 (Marks: 1) - Please choose one

After the execution of SAR instruction

- ▶ **The msb is replaced by a 0**
- ▶ The msb is replaced by 1
- ▶ The msb retains its original value
- ▶ The msb is replaced by the value of CF

Question No: 2 (Marks: 1) - Please choose one

RETF will pop the offset in the

- ▶ BP
- ▶ **IP**
- ▶ SP
- ▶ SI

Question No: 3 (Marks: 1) - Please choose one

The routine that executes in response to an INT instruction is called

- ▶ **ISR**
- ▶ IRS
- ▶ ISP
- ▶ IRT

Question No: 4 (Marks: 1) - Please choose one

The first instruction of “COM” file must be at offset:

- ▶ 0x0010
- ▶ **0x0100**
- ▶ 0x1000
- ▶ 0x0000

Question No: 5 (Marks: 1) - Please choose one

"Far" jump is not position relative but is _____

- ▶ memory dependent
- ▶ **Absolute**
- ▶ temporary
- ▶ indirect

Question No: 6 (Marks: 1) - Please choose one

Only _____ instructions allow moving data from memory to memory.

- ▶ **string**
- ▶ word
- ▶ indirect
- ▶ stack

Question No: 7 (Marks: 1) - Please choose one

After the execution of instruction "RET 2"

- ▶ **SP is incremented by 2**
- ▶ SP is decremented by 2
- ▶ SP is incremented by 4
- ▶ SP is decremented by 4

Question No: 8 (Marks: 1) - Please choose one

DIV instruction has

- ▶ **Two forms**
- ▶ Three forms
- ▶ Four forms
- ▶ Five forms

Question No: 9 (Marks: 1) - Please choose one

When the operand of DIV instruction is of 16 bits then implied dividend will be of

- ▶ 8 bits
- ▶ 16 bits
- ▶ **32 bits**
- ▶ 64 bits

Question No: 10 (Marks: 1) - Please choose one

After the execution of MOVS instruction which of the following registers are updated

- ▶ SI only
- ▶ DI only
- ▶ **SI and DI only**
- ▶ SI, DI and BP only

Question No: 11 (Marks: 1) - Please choose one

In 8088 architecture, whenever an element is pushed on the stack

- ▶ SP is decremented by 1
- ▶ **SP is decremented by 2**
- ▶ SP is decremented by 3
- ▶ SP is decremented by 4

Question No: 12 (Marks: 1) - Please choose one

When a very large number is divided by very small number so that the quotient is larger than the space provided, this is called

- ▶ Divide logical error

▶ **Divide overflow error**

- ▶ Divide syntax error
- ▶ An illegal instruction

Question No: 13 (Marks: 1) - Please choose one

In the word designated for one screen location, the higher address contains

- ▶ **The character code**
- ▶ The attribute byte
- ▶ The parameters
- ▶ The dimensions

Question No: 14 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

- ▶ `mov AX, 0xb008`
`mov ES, AX`
- ▶ **`mov AX, 0xb800`**
`mov ES, AX`
- ▶ `mov AX, 0x8b00`
`mov ES, AX`
- ▶ `mov AX, 0x800b`
`mov ES, AX`

Question No: 15 (Marks: 1) - Please choose one

In a video memory, each screen location corresponds to

- ▶ One byte
- ▶ **Two bytes**
- ▶ Four bytes
- ▶ Eight bytes

Question No: 16 (Marks: 1) - Please choose one

The execution of the instruction “`mov word [ES : 0], 0x0741`” will print character “A” on screen , background color of the screen will be

- ▶ **Black**
- ▶ White
- ▶ Red
- ▶ Blue

Question No: 1 (Marks: 1) - Please choose one

The physical address of the stack is obtained by

- ▶ SS:SI combination
- ▶ **SS:SP combination**
- ▶ ES:BP combination
- ▶ ES:SP combination

Question No: 2 (Marks: 1) - Please choose one

After the execution of instruction “`RET` ”

- ▶ **SP is incremented by 2**
- ▶ SP is decremented by 2
- ▶ SP is incremented by 1
- ▶ SP is decremented by 1

Question No: 3 (Marks: 1) - Please choose one

The second byte in the word designated for one screen location holds

- ▶ The dimensions of the screen
- ▶ Character position on the screen
- ▶ **Character color on the screen**
- ▶ ASCII code of the character

Question No: 4 (Marks: 1) - Please choose one
 REP will always

- ▶ Increment CX by 1
- ▶ Increment CX by 2
- ▶ **Decrement CX by 1**
- ▶ Decrement CX by 2

Question No: 5 (Marks: 1) - Please choose one
The basic function of SCAS instruction is to

- ▶ **Compare**
 - ▶ Scan
 - ▶ Sort
 - ▶ Move data

Question No: 6 (Marks: 1) - Please choose one
Index registers are used to store _____

-

Question No: 7 (Marks: 1) - Please choose one
The bits of the _____ work independently and individually

- ▶ ☐ index register
☐ ☐ ☐ ☐ ☐ ☐ ▶ base register
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ **▶ flags register**
☐ ☐ ☐ ☐ ☐ ☐ ▶ accumulator

Question No: 8 (Marks: 1) - Please choose one
To convert any digit to its ASCII representation

- ▶ **Add 0x30 in the digit**
 - ▶ Subtract 0x30 from the digit
 - ▶ Add 0x61 in the digit
 - ▶ Subtract 0x61 from the digit

Question No: 9 (Marks: 1) - Please choose one
When a 32 bit number is divided by a 16 bit number, the quotient is of

- ▶ 32 bits
 - ▶ 16 bits
 - ▶ 8 bits
 - ▶ **4 bits**

Question No: 10 (Marks: 1) - Please choose one
When a 16 bit number is divided by an 8 bit number, the quotient will be in

- ▶ AX
- ▶ **AL**
- ▶ AH
- ▶ DX

Question No: 11 (Marks: 1) - Please choose one

Which mathematical operation is dominant during the execution of SCAS instruction

- ▶ **Division**
- ▶ Multiplication
- ▶ Addition
- ▶ Subtraction

Question No: 12 (Marks: 1) - Please choose one

If AX contains decimal -2 and BX contains decimal 2 then after the execution of instructions:
CMP AX, BX
JA label

- ▶ Jump will be taken
- ▶ **Zero flag will set**
- ▶ ZF will contain value -4
- ▶ Jump will not be taken

Question No: 13 (Marks: 1) - Please choose one

The execution of the instruction "mov word [ES : 160], 0x1230" will print a character "0" on the screen at

- ▶ Second column of first row
- ▶ **First column of second row**
- ▶ Second column of second row
- ▶ First column of third row

Question No: 14 (Marks: 1) - Please choose one

If the direction of the processing of a string is from higher addresses towards lower addresses then

- ▶ ZF is cleared
- ▶ **DF is cleared**
- ▶ ZF is set
- ▶ DF is set

Question No: 15 (Marks: 1) - Please choose one

The instruction ADC has _____ Operand(s)

- ▶ 0
- ▶ 1
- ▶ 2
- ▶ **3**

Question No: 16 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the red component of background color ?

- ▶ 3
- ▶ 4
- ▶ 5
- ▶ 6

Stack is a _____ that behaves in a first in last out manner.

- Program
- **data structure**
- Heap
- None of the Given

The physical address of the stack is obtained by

- SS:SI combination
- **SS:SP combination**
- ES:BP combination
- ES:SP combination

Foreground and background parameter will be

- 32bits
- 16bits
- **8bits**
- 4bits

The clear screen operation initialize whole block of memory

- **0741**
- 0417
- 0714
- 0174

In STOSB instruction, when DF is Set, SI is

- Incremented by 1
- Incremented by 2
- **Decrement by 1 (Not confirmed)**
- Decrement by 2

Assembly language is:

- **Low-level programming language**
- High-level programming language
- Also known as machine language
- Not considered closer to the computer

A 32 Bit processor has accumulator of -----

- 8 bit
- 16 bit
- **32 bit**
- 64 bit

To transfer control back the RET instruction take

- 1 argument
- 1 argument

- 3 arguments
- **No arguments**

RET is executed, it recovers the values from

- Register
- **Stack**
- Data segment
- Code segment

To convert any digit to its ASCII representation

- **Add 0x30 in the digit**
- Subtract 0x30 from the digit
- Add 0x61 in the digit
- Subtract 0x61 from the digit

The prevalent convention in most high level languages is stack clearing by the

- **Caller**
- **Callee**
- **RET**
- **Stack**

After execution of JCXZ instruction CX will changed with flag affect.

- CF
- OF
- DF
- **None of Above**

Execution of the instruction "mov word [ES : 0], 0x0741" will print

- **"A" appear on the top left of screen**
- "A" appear on the top right of screen
- "A" appear on the center of screen
- "A" appear on the bottom left of screen

if contains decimal -2 and BX contains decimal 2 then after the execution of instructions:

CMP AX, BX

JA label

- Jump will be taken
- **Zero flag will set**
- ZF will contain value -4
- Jump will not be taken

Which of the following options contain the set of instructions to open a window to the video memory?

- mov AX, 0xb008
mov ES, AX
- **mov AX, 0xb800**
mov ES, AX
- mov AX, 0x8b00
mov ES, AX
- mov AX, 0x800b

mov ES, AX

If D is "35" is shift to left 2 bits the new value

- 35
- 70
- **140**
- 17

Execution of the instruction "mov word [ES : 0], 0x1230" will print the character color will

- **Green**
- White
- Red
- Black

1. Assembly language is not a low level language.

a. True

b. False

2. In case of COM File first command parameter is stored at _____ offset of program segment prefix.

a. 0x80 (Not Confirm)

b. 0x82

c. 0x84

d. 0x86

3. Address always goes from

a. Processor to meory

b. Memory to processor

c. Memory to memory

d. None of the above

4. The source register in OUT is

a. AL or AX

b. BL or BX

c. CL or CX

d. DL or DX

5. By default CS is associated with

a. SS

b. BP

c. CX

d. IP

6. Which of the following pins of parallel port are grounded

a. 10-18

b. 18-25

c. 25-32

d. 32-39

7. In the instruction mov word [es:160], 0x1230, 30 represents the character

a. A

b. B

c. 0

d. 1

8. On executing 0x21 0x3D, if file cant be opened then

a. CF will contain 1

b. CF will contain 0

c. ZF will contain 1

d. ZF will contain 0

9. Which of the following IRQ is cascading interrupt

a. IRQ 0

b. IRQ 1

c. IRQ 2

d. IRQ 3

10. The execution of instruction `mov word [es:160], 0x1230`, will print a character on the screen at
- First column of second row
 - Second column of first row
 - Second column of second row
 - First column of third row**

❖ One screen location corresponds to a

Byte
Word
Double byte
Double word

After the execution of “**PUSH AX**” statement

AX register will reside on the stack
A copy of AX will go on the stack
The value of AX disappear after moving on stack
Stack will send an acceptance message

❖ Physical address of the stack is obtained by

SS:SI combination
SS:SP combination
ES:BP combination
ES:SP combination

❖ If the address of memory location Num1 is 0117 and its content is 0005 then after execution of the instruction “`mov bx, Num1`” bx will contain

0005 (Pending)

0117
Num1
1701

In STOS instruction, the implied source will always be in

AL or AX registers
DL or DX registers
BL or BX registers
CL or CX registers

The shift logical right operation inserts

A zero at right
A zero at left
A one at right
A one at left

REP will always

- Increment CX by 1
- Increment CX by 2
- Decrement CX by 1
- Decrement CX by 2

When an item is pushed on the decrementing stack, the top of the stack is

- First decremented and then element copied on to the stack
- First incremented and then element copied on to the stack
- Decrement after the element copied on to the stack
- Incremented after the element copied on to the stack

assembly the CX register is used normally as a _____ register.

- source
- counter
- index
- pointer

Which is the unidirectional bus ?

- (I) Control Bus
- (II) Data Bus
- (III) Address Bus
- I only
- II only
- III only
- I and II only

The basic function of SCAS instruction is to

- Compare
- Scan
- Sort
- Move data

_____ register holds the address of next instruction is to be executed

- Base pointer
- Code segment
- Source index
- Program counter

JC and JNC test the _____ flag.

- carry
- parity
- zero
- sign

After the execution of REP instruction CX will be decremented then which of the following flags will be affected?

- CF
- OF
- DF

No flags will be affected

In string manipulation whenever an instruction needs a memory source, which of the following will hold the pointer to it?

ES: DI

ES: BP

DS:BP

DS:SI

which bit sets the character "blinking" on the screen?

- 5
- 6
- 7
- 8

If we want to divide a signed number by 2, this operation can better be accomplished by

- SHR
- SAR
- SRL
- SAL

After the execution of STOSWB, the CX will be.....

- Incremented by 1
- Incremented by 2
- Decrement by 1
- Decrement by 2

Each screen location corresponds to a word, the lower byte of this word contains ____

The character code

- The attribute byte
- The parameters
- The dimensions

❖ In a video memory, each screen location corresponds to

One byte

- Two bytes
- Four bytes
- Eight bytes

❖ Immediate operands of Push are called:-

- ▶ **Source Operands**
- ▶ Destination Operands
- ▶ Data Operands
- ▶ Stack Operands

❖ Extended ASCII has how many characters:-

- ▶ 64

- ▶ 128
- ▶ **256**
- ▶ 512

❖ The video attribute byte of Red component of foreground color is:-

- ▶ **2**
- ▶ 3
- ▶ 4
- ▶ 5

❖ Process of Signals bak & forth is called:-

- ▶ Programming
- ▶ **Activity**
- ▶ Interruption
- ▶ Communication

❖ 32 Bit Processor has an accumulator of:-

- ▶ 8 Bits
- ▶ 16 Bits
- ▶ **32 Bits**
- ▶ 64 Bits

❖ When a relative address is stored in 16 Bits then the jump is known as:-

- ▶ Near
- ▶ **Short**
- ▶ Far
- ▶ Close

❖ In order to convert digit into ASCII value following is added:-

- ▶ 0x20
- ▶ **0x30**
- ▶ 0x40
- ▶ 0x100

Question No: 1 (Marks: 1) - Please choose one

The physical address of the stack is obtained by

- ▶ SS:SI combination
- ▶ **SS:SP combination**
- ▶ ES:BP combination
- ▶ ES:SP combination

Question No: 2 (Marks: 1) - Please choose one

Value of AH in the write Graphics pixel service is

- ▶ 0Ch
- ▶ 0Bh
- ▶ 1Ch
- ▶ 2Ch

Question No: 3 (Marks: 1) - Please choose one

Threads can have function calls, parameters and _____ variables.

- ▶ **global**
- ▶ local
- ▶ legal
- ▶ illegal

Question No: 4 (Marks: 1) - Please choose one
Creation of threads can be

- ▶ static
- ▶ **dynamic**
- ▶ easy
- ▶ difficult

Question No: 5 (Marks: 1) - Please choose one
How many prevalent calling conventions do exist

- ▶ 1
- ▶ **2**
- ▶ 3
- ▶ 4

Question No: 6 (Marks: 1) - Please choose one
VESA VBE 2.0 is a standard for

- ▶ **High resolution Mode**
- ▶ Low resolution Mode
- ▶ Medium resolution Mode
- ▶ Very High resolution Mode

Question No: 7 (Marks: 1) - Please choose one
The serial port connection is a ----- connector

- ▶ **9pin DB 9**
- ▶ 8pin DB 9
- ▶ 3pin DB 9
- ▶ 9pin DB 5

Question No: 8 (Marks: 1) - Please choose one
Which of the following gives the more logical view of the storage medium

- ▶ BIOS
- ▶ **DOS**
- ▶ Both
- ▶ None

Question No: 9 (Marks: 1) - Please choose one
In STOSB instruction, when DF is clear, SI is

- ▶ **Incremented by 1**
- ▶ Incremented by 2
- ▶ Decrement by 1
- ▶ Decrement by 2

Question No: 10 (Marks: 1) - Please choose one
After the execution of STOSW the CX will be

- ▶ Decrement by 1
- ▶ Decrement by 2
- ▶ **Incremented by 1**
- ▶ Incremented by 2

Question No: 11 (Marks: 1) - Please choose one

IRQ is referred to

- ▶ **Eight input signals**
- ▶ One output signal
- ▶ One input signals
- ▶ Eight output signals

Question No: 12 (Marks: 1) - Please choose one

Which of the following IRQs is derived by a key board?

- ▶ IRQ 0
- ▶ **IRQ 1**
- ▶ IRQ 2
- ▶ IRQ 3

Question No: 13 (Marks: 1) - Please choose one

Which of the following IRQs is connected to serial port COM 1?

- ▶ **IRQ 4**
- ▶ IRQ 5
- ▶ IRQ 6
- ▶ IRQ 7

Question No: 14 (Marks: 1) - Please choose one

The physical address of IDT(Interrupt Descriptor Table) is stored in _____

- ▶ GDTR
- ▶ **IDTR**
- ▶ IVT
- ▶ IDTT

Question No: 15 (Marks: 1) - Please choose one

Assembly language is:

- ▶ **Low-level programming language**
- ▶ High-level programming language
- ▶ Also known as machine language
- ▶ Not considered closer to the computer

Question No: 16 (Marks: 1) - Please choose one

The number of bits required to access 1MB of memory are

- ▶ 16 bits
- ▶ 32 bits
- ▶ **Depends on the processor architecture**
- ▶ 20 bits

Question No: 17 (Marks: 1) - Please choose one

In STOSB instruction, SI is decremented or incremented by

- ▶ 3
- ▶ 2
- ▶ **1**
- ▶ 4

Question No: 18 (Marks: 1) - Please choose one

In programmable interrupt controller, which of the following ports is referred as a control port.

- ▶ 19
- ▶ **20**

- ▶ 21
- ▶ 22

Question No: 19 (Marks: 1) - Please choose one

INT 21 service 01H is used to read character from standard input with echo. It returns the result in _____ register.

- ▶ **AL**
- ▶ BL
- ▶ CL
- ▶ BH

Question No: 20 (Marks: 1) - Please choose one

In device attribute word, which of the following bit decides whether it is a character device or a block device

- ▶ Bit 12
- ▶ Bit 13
- ▶ Bit 14
- ▶ Bit 15

Question No: 21 (Marks: 1) - Please choose one

In 9pin DB 9, which pin number is assigned to CTS (Clear To Send) ?

- ▶ 6
- ▶ 7
- ▶ **8**
- ▶ 9

Question No: 22 (Marks: 1) - Please choose one

In 9pin DB 9, which pin number is assigned to RD (Received Data) ?

- ▶ 1
- ▶ **2**
- ▶ 3
- ▶ 4

Question No: 23 (Marks: 1) - Please choose one

VESA (Video Electronics Standards Association) organizes 16 color bits for every pixel in

- ▶ 5:5:5 format
- ▶ **5:6:5 format**
- ▶ 6:5:6 format
- ▶ 5:6:7 format

Question No: 24 (Marks: 1) - Please choose one

Motorola 68K processors have 23bit general purpose registers.

- ▶ 4
- ▶ 8
- ▶ **16**
- ▶ 32

Question No: 25 (Marks: 1) - Please choose one

Programmable Interrupt Controller (PIC) has

- ▶ One input signals and eight output signals
- ▶ One input signal and one output signal
- ▶ **Eight input signals and one output signals**
- ▶ Eight input signals and eight output signals

Question No: 26 (Marks: 1) - Please choose one

Video services are classified into..... broad categories.

- ▶ 5
- ▶ 4
- ▶ 3
- ▶ 2

In primitive form, the block processing instructions operate on _____ of memory at one time

1 whole block

2 A single cell

3 A single bit

4 Whole segment

After the execution of STOSWB, the cx will be

1 Decrement by 1

2 Decrement by 2

3 Increment by 1

4 Increment by 2

In STOSW instructions when DF is set SI is

1 / 3

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1 Decrement by 1

2 Decrement by 2

3 Increment by 1

4 Increment by 2

Which bit of the attribute byte represents the intensity component of foreground color?

1 4th

2 5th

3 6th

4 3rd

Which of the following flags will be affected by Movsw:

1 DF

2 / 3

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2 PF

3 ZF

4 Not effect on flag

- ❖ The Transfer control back the RET instruction take:
 - ▶ 1 argument
 - ▶ 2 argument
 - ▶ 3 argument
 - ▶ No argument

- ❖ The STOSB instruction SI is decremented or incremented by:
 - ▶ 4
 - ▶ 1
 - ▶ 2
 - ▶ 3

- ❖ CMPS instruction subtracts the source location to the destination location. Destination location always lies in
 - ▶ DS:SI
 - ▶ DS:DI
 - ▶ ES:SI
 - ▶ ES:DI

- ❖ Regarding assembler, which statement is true:
 - ▶ Assembler converts mnemonics to the corresponding OP CODE
 - ▶ Assembler converts OP CODE to the corresponding mnemonics.
 - ▶ Assembler executes the Assembly code all at once.
 - ▶ Assembler executes the Assembly code step by step.

- ❖ If “BB” is the OP CODE of the instruction which states to “move a constant value to AX Register”, the hexadecimal Representation (Using little Endian Notation) of the instruction “Mov AX,36” (“150” in hexadecimal number system) will be:
 - ▶ 0xBB0150
 - ▶ 0x5001BB
 - ▶ 0x01BB50
 - ▶ 0xBB5001

- ❖ In the instruction Mov AX,5 the number of operands are:
 - ▶ 1
 - ▶ 2
 - ▶ 3
 - ▶ 4

- ❖ A maximum parameters a subroutine can receive (with the help of Registers) are:
 - ▶ 6
 - ▶ 7
 - ▶ 8
 - ▶ 9

- ❖ In Assembly the CX Register is used normally as a _____ Register.
 - ▶ Source
 - ▶ Counter
 - ▶ Index
 - ▶ Pointer

- ❖ All the addressing Mechanisams in IAPX88 return a number called _____ address.
 - ▶ effective

- ▶ faulty
- ▶ indirect
- ▶ direct
- ❖ When a 16 bit number is divided by an 8 bit number, the dividend will be in:
 - ▶ AX
 - ▶ BX
 - ▶ CX
 - ▶ DX
- ❖ The Left-Shift-Operation the left most bit _____
 - ▶ will drop
 - ▶ will go into CF
 - ▶ will come to the right most
 - ▶ will be always 1
- ❖ Suppose the decimal number “35” after shifting its binary two bits to left, the new value becomes _____
 - ▶ 35
 - ▶ 70
 - ▶ 140
 - ▶ 17
- ❖ When divide overflow occurs processor will be interrupted this type of interrupt is called:
 - ▶ Hardware Interrupt.
 - ▶ Software Interrupt.
 - ▶ Processor execution
 - ▶ Logical Interrupts
- ❖ Which mathematical operation is dominant during the execution of SCAS instruction:
 - ▶ Division
 - ▶ Multiplication
 - ▶ Addition
 - ▶ Subtraction
- ❖ After the execution of REP instruction CX will be decremented then which of the following flags will be affected?
 - ▶ CF
 - ▶ OF
 - ▶ DF
 - ▶ No flags will be affected
- ❖ _____ is the reasons due to which strings instructions are used in 8088
 - ▶ Efficiency and Accuracy
 - ▶ Reduction in code size and accuracy
 - ▶ Reduction in code size and speed
 - ▶ Reduction in code size and efficiency





CS401 Assembly Language
Solved MCQS
From Midterm Papers

May 02,2011

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PSMD01(IEMS)

MIDTERM FALL 2011
CS401 Assembly Language

Question No:1 (Marks: 1) - Please choose one

The first instruction of “COM” file must be at offset:

▶ 0x0010

▶ **0x0100** (Page 19)

▶ 0x1000

▶ 0x0000

Question No:2 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES : 0], 0x0741” will print character “A” on screen , background color of the screen will be

▶ **Black** (Page 81)

▶ White

▶ Red

▶ Blue

Question No:3 (Marks: 1) - Please choose one

The iAPX888 architecture consists of _____ register.

▶ 12

▶ 14

▶ **16** (Page 15)

▶ 18

Question No:4 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES: 0], 0x0741” will print “A” on the screen, color of the character will be

▶ Black

▶ **White** (Page 81)

▶ Red

▶ Blue

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Question No:5 (Marks: 1) - Please choose one

One screen location corresponds to a

- ▶ Byte
- ▶ **Word** (Page 80)
- ▶ Double byte
- ▶ Double word

Question No:6 (Marks: 1) - Please choose one

When an item is pushed on the decrementing stack, the top of the stack is

- ▶ **First decremented and then element copied on to the stack** (Page 68)
- ▶ First incremented and then element copied on to the stack
- ▶ Decrement after the element copied on to the stack
- ▶ Incremented after the element copied on to the stack

Question No:7 (Marks: 1) - Please choose one

Each screen location corresponds to a word, the lower byte of this word contains ____

- ▶ **The character code** (Page 81)
- ▶ The attribute byte
- ▶ The parameters
- ▶ The dimensions

Question No:8 (Marks: 1) - Please choose one

if ax contains decimal -2 and BX contains decimal 2 then after the execution of instructions: CMP AX, BX ,JA label

- ▶ Jump will be taken
- ▶ Zero flag will set
- ▶ ZF will contain value -4
- ▶ **Jump will not be taken (rr)**

Question No:9 (Marks: 1) - Please choose one

If D is "35" is shift to left 2 bits the new value

- ▶ 35
- ▶ 70
- ▶ 140
- ▶ 17

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Question No:10 (Marks: 1) - Please choose one

When two 16bit numbers are added the answer can be 17 bits long, this extra bit that won't fit in the target register is placed in the where it can be used and tested

► **carry flag** (Page 16)

- Parity Flag
- Auxiliary Carry
- Zero Flag

Question No: 11 (Marks: 1) - Please choose one

Only instructions allow moving data from memory to memory.

► **string** (Page 29)

- word
- indirect
- stack

Question No:12 (Marks: 1) - Please choose one

When a 16 bit number is divided by an 8 bit number, the quotient will be in

► **AL** (Page 85)

- AX
- AH
- DX

Question No:13 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the red component of background color ?

- 3
- 4
- 5
- **6** (Page 81)

Question No:14 (Marks: 1) - Please choose one

| 0 |-->| 1 | 1 | 0 | 1 | 0 | 0 | 0 |-->| C | is a example of _____

- Shl
- sar
- **Shr** (Page 52)
- Sal

Question No:15 (Marks: 1) - Please choose one

allow changing specific processor behaviors and are used to play with it.

► **Special Instructions** (Page 14)

- Data Movement Instructions
- Program Control Instructions
- Arithmetic and Logic Instructions

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Question No:16 (Marks: 1) - Please choose one

8088 is a 16bit processor with its accumulator and all registers of _____.

▶ 32 bits

▶ 6 bits

▶ **16 bits** (Page 14)

▶ 64 bits

Question No:17 (Marks: 1) - Please choose one

decrements SP (the stack pointer) by two and then transfers a word from the source operand to the top of stack

▶ **PUSH** (Page 71)

▶ POP

▶ CALL

▶ RET

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CS401 Assembly Language

1. In instruction ADC the operands can be

- Two register only
- Two register and one memory location
- **CF and two other operands** (Page 57)
- ZF and two other operands

2. After the execution of instruction “RET”

- **SP is incremented by 2** (Page 66)
- SP is decremented by 2
- SP is incremented by 1
- SP is decremented by 1

3. The extended ASCII has

- 64 characters
- **128 characters** (Page 79)
- 256 characters
- 502 characters

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4. The second byte in the word designated for screen location holds
- The dimension of the screen
 - Character position on the screen
 - **Character color on the screen** (Page 81)
 - ACSII code of the character
5. REP will always
- Incremented CX by 1
 - Incremented CX by 2
 - **Decrement CX by 1** (Page 92)
 - Decrement CX by 2
6. The routine that executes in response to an INT instruction is called
- **ISR** (Page 103)
 - IRS
 - ISP
 - IRT
7. The iAPX888 architecture consists of _____ register.
- 12
 - 14
 - **16** (Page 15) Rep
 - 18
8. In the instruction “CMP AX,BX” the contents of
- AX are changed
 - BX are changed
 - CX are changed
 - **Flag register are changed** (Page 39)
9. All the addressing mechanisms iniAPX88 return a number called _____ address.
- **Effective** (Page 33)
 - faulty
 - indirect
 - direct
10. The execution of the instruction “mov word [ES: DI], 0x0720”
- **will clear next character on screen** (Page 82)
 - will print “20” at top left of the screen
 - will print “20” at top right of the screen
 - will move DI at location 0720 on the screen

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11. “mov byte [num1],5” is _____ instruction.

- ☐ legal
- ☒ **illegal** (Page 30)
- ☐ stack based
- ☐ memory indirect

12. MOV instruction transfers a byte or word from which of the following source location.

- ☐ DS:DI
- ☐ ES:SI
- ☒ **ES:DI** (Page 92)
- ☐ DS:SI

13. The execution of the instruction “mov word [ES: 0], 0x0741” will print “A” on the screen, color of the character will be

- ☐ Black
- ☒ **White** (Page 81) rep
- ☐ Red
- ☐ Blue

14. If AX contains FFFFh, then after execution of instruction “SAL ax, 3”, the result will be

- ☐ -3
- ☐ +3
- ☐ -8
- ☐ +8

15. If the decimal number “35” is shifted by two bit to left, the new value will be

- ☐ 35
- ☐ 70
- ☐ 140
- ☐ 17

16. While using STOSB, if DF=1 then

- ☐ The value of SI will be incremented by one
- ☐ The value of SI will be incremented by two
- ☒ **The value of SI will be decremented by one**
- ☐ The value of SI will be decremented by two

[click here for detail](#)

17. After the execution of STOSW, the CX will be

- ☐ Decrement by 1
- ☒ **Decrement by 2** (Page 92)
- ☐ Increment by 1
- ☐ Increment by 2

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18. The memory address always move from

- ☐ processor to memory
- ☐ memory to processor
- ☐ memory to peripheral
- ☐ peripheral to processor

19. An offset alone is not complete without

- ☐ **Segment** (Page 34)
- ☐ code label
- ☐ index register
- ☐ data label

20. Code Segment is associated to _____ register by default.

- ☐ **IP** (Page 34)
- ☐ SS
- ☐ BP
- ☐ CX

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CS401 Assembly Language

Question No:1 (Marks: 1) - Please choose one

After the execution of SAR instruction:

- ▶ MSB remain as it is
- ▶ MSB Will change
- ▶ **MSB move to left** (Page 52)
- ▶ No change will occur.

Question No:2 (Marks: 1) - Please choose one

ASCII stands for _____.

The screen is two dimensional space having:

- ▶ **25 Rows and 25 Columns** (Page 80)
- ▶ 25 Rows and 80 Columns
- ▶ 80 Rows and 80 Columns
- ▶ 80 Rows and 25 Columns

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Question No:3 (Marks: 1) - Please choose one

In the Rotate Right Operation every bit moves one position to right and the bit dropped from the right is inserted at the left and:

► **Dropped in CF** (Page 53)

- moves to AL
- Don't go anywhere.

Question No:4 (Marks: 1) - Please choose one

_____ of the following flags will be affected by MOVSB?

- DF
- ZF
- PF
- No effect on flags.

Question No:5 (Marks: 1) - Please choose one

The iAPX88 processor supports _____ modes of memory access.

- 5
- 6
- **7** (Page 35)
- 8

MIDTERM FALL 2010

Question No:1 (Marks: 1) - Please choose one

Stack is a _____ that behaves in a first in last out manner.

- Program
- **data structure** (Page 67)
- Heap
- None of the Given

Question No:2 (Marks: 1) - Please choose one

The physical address of the stack is obtained by

- SS:SI combination
- **SS:SP combination** (Page 68)
- ES:BP combination
- ES:SP combination

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Question No:3 (Marks: 1) - Please choose one

Foreground and background parameter will be

- ▶ 32bits
- ▶ 16bits
- ▶ 8bits
- ▶ 4bits

Question No:4 (Marks: 1) - Please choose one

The clear screen operation initialize whole block of memory

- ▶ 0741
- ▶ 0417
- ▶ 0714

▶ **0174, 0720** (Page 91)

Question No:5 (Marks: 1) - Please choose one

In STOSB instruction, when DF is Set, SI is

- ▶ Incremented by 1
- ▶ Incremented by 2
- ▶ Decrement by 1 (Not confirmed)
- ▶ Decrement by 2

Question No:6 (Marks: 1) - Please choose one

Assembly language is:

▶ **Low-level programming language**

[Click here for detail](#)

- ▶ High-level programming language
- ▶ Also known as machine language
- ▶ Not considered closer to the computer

Question No:7 (Marks: 1) - Please choose one

A 32 Bit processor has accumulator of -----

- ▶ 8 bit
- ▶ 16 bit
- ▶ **32 bit**
- ▶ 64 bit

(Page 12)

Question No:8 (Marks: 1) - Please choose one

To transfer control back the RET instruction take

- ▶ 1 argument
- ▶ 1 argument
- ▶ **3 arguments**
- ▶ No arguments

(Page 72)

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Question No:9 (Marks: 1) - Please choose one

RET is executed, it recovers the values from

- ▶ Register
- ▶ **Stack** (Page 71)
- ▶ Data segment
- ▶ Code segment

Question No:10 (Marks: 1) - Please choose one

To convert any digit to its ASCII representation

- ▶ **Add 0x30 in the digit** (Page 80)
- ▶ Subtract 0x30 from the digit
- ▶ Add 0x61 in the digit
- ▶ Subtract 0x61 from the digit

Question No:11 (Marks: 1) - Please choose one

The prevalent convention in most high level languages is stack clearing by the

- ▶ Caller
- ▶ **Callee** (Page 74)
- ▶ RET
- ▶ Stack

Question No:12 (Marks: 1) - Please choose one

After execution of JCXZ instruction CX will changed with flag affect.

- ▶ CF
- ▶ OF
- ▶ DF
- ▶ **None of Above** (Page 43)

Question No:13 (Marks: 1) - Please choose one

Execution of the instruction “mov word [ES : 0], 0x0741” will print

- ▶ **“A” appear on the top left of screen** (Page 81)
- ▶ “A” appear on the top right of screen
- ▶ “A” appear on the center of screen
- ▶ “A” appear on the bottom left of screen

Question No:14 (Marks: 1) - Please choose one

if contains decimal -2 and BX contains decimal 2 then after the execution of instructions:

CMP AX, BX

JA label

- ▶ Jump will be taken

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- ▶ Zero flag will set
- ▶ ZF will contain value -4
- ▶ **Jump will not be taken**

Question No:15 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

- ▶ mov AX, 0xb008
mov ES, AX
- ▶ **mov AX, 0xb800
mov ES, AX** (Page 81) rep
- ▶ mov AX, 0x8b00
mov ES, AX
- ▶ mov AX, 0x800b
mov ES, AX

Question No:16 (Marks: 1) - Please choose one

If D is “35” is shift to left 2 bits the new value

- ▶ 35
- ▶ 70
- ▶ 140
- ▶ 17

Question No:17 (Marks: 1) - Please choose one

Execution of the instruction “mov word [ES : 0], 0x1230” will print the character color will

- ▶ **Green**
- ▶ White
- ▶ Red
- ▶ Black

MIDTERM EXAMINATION Spring 2010

Question No: 1 (Marks: 1) - Please choose one

After the execution of SAR instruction

- ▶ The msb is replaced by a 0
- ▶ The msb is replaced by 1
- ▶ The msb retains its original value
- ▶ The msb is replaced by the value of CF

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Question No: 2 (Marks: 1) - Please choose one

RETF will pop the offset in the

- ▶ BP
- ▶ **IP** (Page 69)
- ▶ SP
- ▶ SI

Question No: 3 (Marks: 1) - Please choose one

The routine that executes in response to an INT instruction is called

- ▶ **ISR** (Page 103) rep
- ▶ IRS
- ▶ ISP
- ▶ IRT

Question No: 4 (Marks: 1) - Please choose one

The first instruction of “COM” file must be at offset:

- ▶ 0x0010
- ▶ **0x0100** (Page 19) rep
- ▶ 0x1000
- ▶ 0x0000

Question No: 5 (Marks: 1) - Please choose one

“Far” jump is not position relative but is _____

- ▶ memory dependent
- ▶ **Absolute** (Page 46)
- ▶ Temporary
- ▶ indirect

Question No: 6 (Marks: 1) - Please choose one

Only _____ instructions allow moving data from memory to memory.

- ▶ **string** (Page 29) rep
- ▶ word
- ▶ indirect
- ▶ stack

Question No: 7 (Marks: 1) - Please choose one

After the execution of instruction “RET 2”

- ▶ SP is incremented by 2

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▶ **SP is decremented by 2** (Page 66) rep

- ▶ SP is incremented by 4
- ▶ SP is decremented by 4

Question No: 8 (Marks: 1) - Please choose one

DIV instruction has

▶ **Two forms** (Page 85)

- ▶ Three forms
- ▶ Four forms
- ▶ Five forms

Question No: 9 (Marks: 1) - Please choose one

When the operand of DIV instruction is of 16 bits then implied dividend will be of

▶ **8 bits** (Page 85)

- ▶ 16 bits
- ▶ 32 bits
- ▶ 64 bits

Question No: 10 (Marks: 1) - Please choose one

After the execution of MOVS instruction which of the following registers are updated

- ▶ SI only
- ▶ DI only
- ▶ **SI and DI only** (Page 92)
- ▶ SI, DI and BP only

Question No: 11 (Marks: 1) - Please choose one

In 8088 architecture, whenever an element is pushed on the stack

- ▶ SP is decremented by 1
- ▶ **SP is decremented by 2** (Page 68)
- ▶ SP is decremented by 3
- ▶ SP is decremented by 4

Question No: 12 (Marks: 1) - Please choose one

When a very large number is divided by very small number so that the quotient is larger than the space provided, this is called

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- ▶ Divide logical error
- ▶ **Divide overflow error** (Page 85)
- ▶ Divide syntax error
- ▶ An illegal instruction

Question No: 13 (Marks: 1) - Please choose one

In the word designated for one screen location, the higher address contains

- ▶ The character code
- ▶ **The attribute byte** (Page 81)
- ▶ The parameters
- ▶ The dimensions

Question No: 14 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

- ▶ mov AX, 0xb008
mov ES, AX
- ▶ **mov AX, 0xb800**
mov ES, AX (Page 81) rep
- ▶ mov AX, 0x8b00
mov ES, AX
- ▶ mov AX, 0x800b
mov ES, AX

Question No: 15 (Marks: 1) - Please choose one

In a video memory, each screen location corresponds to

- ▶ One byte
- ▶ Two bytes
- ▶ Four bytes
- ▶ Eight bytes

Question No: 16 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES : 0], 0x0741” will print character “A” on screen , background color of the screen will be

- ▶ **Black** (Page 81) rep
- ▶ White
- ▶ Red
- ▶ Blue

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CS401 MIDTERM FALL2010

Question No:1 (Marks: 1) - Please choose one

One screen location corresponds to a

- ▶ Byte
- ▶ **Word** (Page 80) rep
- ▶ Double byte
- ▶ Double word

Question No:2 (Marks: 1) - Please choose one

After the execution of “PUSH AX” statement

- ▶ AX register will reside on the stack
- ▶ **A copy of AX will go on the stack** (Page 69)
- ▶ The value of AX disappear after moving on stack
- ▶ Stack will send an acceptance message

Question No:3 (Marks: 1) - Please choose one

physical address of the stack is obtained by

- ▶ SS:SP combination
- ▶ SS:SI combination
- ▶ **SS:SP combination** (Page 68) rep
- ▶ ES:BP combination
- ▶ ES:SP combination

Question No:4 (Marks: 1) - Please choose one

If the address of memory location Num1 is 0117 and its content is 0005 then after execution of the instruction “mov bx, Num1” bx will contain

- ▶ 0005
- ▶ **0117** (Page 30)
- ▶ Num1
- ▶ 1701

Question No:5 (Marks: 1) - Please choose one

In STOS instruction, the implied source will always be in

- ▶ **AL or AX registers** (Page 92)
- ▶ DL or DX registers
- ▶ BL or BX registers
- ▶ CL or CX registers

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Question No:6 (Marks: 1) - Please choose one

The shift logical right operation inserts

A zero at right

A zero at left (Page 52)

A one at right

A one at right

Question No:7 (Marks: 1) - Please choose one

REP will always

Increment CX by 1

Increment CX by 2

Decrement CX by 1 (Page 92) rep

Decrement CX by 2

Question No:8 (Marks: 1) - Please choose one

When an item is pushed on the decrementing stack, the top of the stack is

► **First decremented and then element copied on to the stack** (Page 68) rep

► First incremented and then element copied on to the stack

► Decrement after the element copied on to the stack

► Incremented after the element copied on to the stack

Question No:9 (Marks: 1) - Please choose one

assembly the CX register is used normally as a _____ register.

► source

► **counter** (Page 32)

► index

► pointer

Which is the unidirectional bus ?

(I) Control Bus

(II) Data Bus

(III) Address Bus

► I only

► II only

► **III only** (Page 9)

► I and II only

Question No:10 (Marks: 1) - Please choose one

The basic function of SCAS instruction is to

► **Compare** (Page 92)

► Scan

► Sort

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► Move data

Question No:11 (Marks: 1) - Please choose one

_____ register holds the address of next instruction is to be executed

- Base pointer
- Code segment
- Source index
- **Program counter**

(Page 13)

Question No:12 (Marks: 1) - Please choose one

JC and JNC test the _____ flag.

- **carry**
- parity
- zero
- sign

(Page 41)

Question No:13 (Marks: 1) - Please choose one

After the execution of REP instruction CX will be decremented then which of the following flags will be affected?

- CF
- OF
- DF
- **No flags will be affected**

(Page 93)

Question No:14 (Marks: 1) - Please choose one

In string manipulation whenever an instruction needs a memory source, which of the following will hold the pointer to it?

- ES: DI
- ES: BP
- DS:BP
- **DS:SI**

(Page 91)

Question No:15 (Marks: 1) - Please choose one

which bit sets the character "blinking" on the screen?

- 5
- 6
- **7**
- 8

(Page 7)

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Question No:16 (Marks: 1) - Please choose one

If we want to divide a signed number by 2, this operation can better be accomplished by

- ▶ SHR
- ▶ **SAR** (Page 52)
- ▶ SHL
- ▶ SAL

Question No:17 (Marks: 1) - Please choose one

After the execution of STOSB,the CX will be.....

- ▶ Incremented by 1
- ▶ Incremented by 2
- ▶ Decrement by 1
- ▶ Decrement by 2

Question No:18 (Marks: 1) - Please choose one

Each screen location corresponds to a word, the lower byte of this word contains ____

- ▶ **The character code** (Page 81) rep
- ▶ The attribute byte
- ▶ The parameters
- ▶ The dimensions

Question No:19 (Marks: 1) - Please choose one

In a video memory, each screen location corresponds to

- ▶ One byte
- ▶ **Two bytes** (Page 86)
- ▶ Four bytes
- ▶ Eight bytes

cs401 paper 02 dec,2010

Question No:1 (Marks: 1) - Please choose one

Execution of the instruction “mov word [ES : 0], 0x0741” will print

- ▶ **“A” appear on the top left of screen** (Page 81) rep
- ▶ “A” appear on the top right of screen
- ▶ “A” appear on the center of screen
- ▶ “A” appear on the bottom left of screen

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Question No:2 (Marks: 1) - Please choose one

After the execution of "PUSH AX" statement

▶ **AX register will reside on the stack** (Page 69) rep

- ▶ A copy of AX will go on the stack
- ▶ The value of AX disappear after moving on stack
- ▶ Stack will send an acceptance message

Question No:3 (Marks: 1) - Please choose one

If D is "35" is shift to left 2 bits the new value

- ▶ 35
- ▶ 70
- ▶ 140
- ▶ 17

Question No:4 (Marks: 1) - Please choose one

When an item is pushed on the decrementing stack, the top of the stack is

▶ **First decremented and then element copied on to the stack** (Page 68) rep

- ▶ First incremented and then element copied on to the stack
- ▶ Decrement after the element copied on to the stack
- ▶ Incremented after the element copied on to the stack

Question No:5 (Marks: 1) - Please choose one

After the execution of REP instruction CX will be decremented then which of the following flags will be affected?

- ▶ CF
- ▶ OF
- ▶ DF
- ▶ **No flags will be affected** (Page 93) rep

Question No:6 (Marks: 1) - Please choose one

In a video memory, each screen location corresponds to

- ▶ One byte
- ▶ **Two bytes (Page 66)**
- ▶ Four bytes
- ▶ Eight bytes

Question No:7 (Marks: 1) - Please choose one

shifting the -15 two bit sAR

- ▶ -7
- ▶ -8
- ▶ 7
- ▶ 8

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Question No:8 (Marks: 1) - Please choose one

mov ax,5 has

- ▶ 1 operand
- ▶ **2 operand**
- ▶ 3 operand
- ▶ 4 operand

(Page 25)

**MIDTERM EXAMINATION
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Question No: 1 (Marks: 1) - Please choose one

The physical address of the stack is obtained by

▶ **SS:SP combination**

- ▶ SS:SI combination
- ▶ **SS:SP combination**
- ▶ ES:BP combination
- ▶ ES:SP combination

(Page 68) rep

Question No: 2 (Marks: 1) - Please choose one

After the execution of instruction “RET ”

- ▶ **SP is incremented by 2**
- ▶ **SP is incremented by 2**
- ▶ SP is decremented by 2
- ▶ SP is incremented by 1
- ▶ SP is decremented by 1

(Page 66) rep

Question No: 3 (Marks: 1) - Please choose one

The second byte in the word designated for one screen location holds

- ▶ **Character color on the screen**
- ▶ The dimensions of the screen
- ▶ Character position on the screen
- ▶ **Character color on the screen**
- ▶ ASCII code of the character

(Page 81) rep

Question No: 4 (Marks: 1) - Please choose one

REP will always

- ▶ Increment CX by 1
- ▶ Increment CX by 2

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▶ **Decrement CX by 1** (Page 92)

▶ Decrement CX by 2

Question No: 5 (Marks: 1) - Please choose one

The basic function of SCAS instruction is to

▶ **Compare** (Page 92) rep

▶ Scan

▶ Sort

▶ Move data

Question No: 6 (Marks: 1) - Please choose one

Index registers are used to store _____

▶ Data

▶ Intermediate result

▶ **Address** (Page 16)

▶ Both data and addresses

Question No: 7 (Marks: 1) - Please choose one

The bits of the _____ work independently and individually

▶ index register

▶ base register

▶ **flags register** (Page 12)

▶ accumulator

Question No: 8 (Marks: 1) - Please choose one

To convert any digit to its ASCII representation

▶ **Add 0x30 in the digit** (Page 80) rep

▶ Subtract 0x30 from the digit

▶ Add 0x61 in the digit

▶ Subtract 0x61 from the digit

Question No: 9 (Marks: 1) - Please choose one

When a 32 bit number is divided by a 16 bit number, the quotient is of

▶ 32 bits

▶ **16 bits** (Page 85)

▶ 8 bits

▶ 4 bits

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Question No: 10 (Marks: 1) - Please choose one

When a 16 bit number is divided by an 8 bit number, the quotient will be in

- ▶ AX
- ▶ **AL** (Page 85) rep
- ▶ AH
- ▶ DX

Question No: 11 (Marks: 1) - Please choose one

Which mathematical operation is dominant during the execution of SCAS instruction

- ▶ Division
- ▶ Multiplication
- ▶ Addition
- ▶ **Subtraction** (Page 92)

Question No: 12 (Marks: 1) - Please choose one

If AX contains decimal -2 and BX contains decimal 2 then after the execution of instructions:

CMP AX, BX

JA label

- ▶ **Jump will be taken**
- ▶ Zero flag will set
- ▶ ZF will contain value -4
- ▶ Jump will not be taken

Question No: 13 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES : 160], 0x1230” will print a character “0” on the screen at

- ▶ Second column of first row
- ▶ **First column of second row** (Page 81)
- ▶ Second column of second row
- ▶ First column of third row

Question No: 14 (Marks: 1) - Please choose one

If the direction of the processing of a string is from higher addresses towards lower addresses then

- ▶ ZF is cleared
- ▶ **DF is cleared** (Page 91)
- ▶ ZF is set
- ▶ DF is set

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Question No: 15 (Marks: 1) - Please choose one

The instruction ADC has _____ Operand(s)

- ▶ 0
- ▶ 1
- ▶ 2
- ▶ 3

(Page 56)

Question No: 16 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the red component of background color ?

- ▶ 3
- ▶ 4
- ▶ 5
- ▶ 6

(Page 81)

MIDTERM EXAMINATION Spring 2010

Question No: 1 (Marks: 1) - Please choose one

Suppose AL contains 5 decimal then after two left shifts produces the value as

- ▶ 5
- ▶ 10
- ▶ 15
- ▶ 20

Question No: 2 (Marks: 1) - Please choose one

In STOS instruction, the implied source will always be in

- ▶ AL or AX registers
- ▶ DL or DX registers
- ▶ BL or BX registers
- ▶ CL or CX registers

(Page 92) rep

Question No: 3 (Marks: 1) - Please choose one

After the execution of STOSW the CX will be

- ▶ Decrement by 1

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- ▶ **Decrement by 2** (Page 92) rep
- ▶ Incremented by 1
- ▶ Incremented by 2

Question No: 4 (Marks: 1) - Please choose one

The basic function of SCAS instruction is to

- ▶ **Compare** (Page 92) rep
- ▶ Scan
- ▶ Sort
- ▶ Move data

Question No: 5 (Marks: 1) - Please choose one

Which is the unidirectional bus ?

- (I) Control Bus
- (II) Data Bus
- (III) Address Bus

- ▶ I only
- ▶ II only
- ▶ **III only** (Page 9) rep
- ▶ I and II only

Question No: 6 (Marks: 1) - Please choose one

The operation of CMP is to

- ▶ **Subtract Source from Destination** (Page 39)
- ▶ Subtract Destination to from Source
- ▶ Add 1 to the Destination
- ▶ Add Source and Destination

Question No: 7 (Marks: 1) - Please choose one

The registers IP, SP, BP, SI, DI, and BX all can contain a _____ offset.

- ▶ 8-bit
- ▶ **16-bit** (Page 21)
- ▶ 32-bit
- ▶ 64-bit

Question No: 8 (Marks: 1) - Please choose one

In assembly the CX register is used normally as a _____ register.

- ▶ source
- ▶ **counter** (Page 92)
- ▶ index
- ▶ pointer

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Question No: 9 (Marks: 1) - Please choose one

All the addressing mechanisms in iAPX88 return a number called _____ address.

- ▶ **effective** (Page 33)
- ▶ faulty
- ▶ indirect
- ▶ direct

Question No: 10 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the blue component of foreground color

- ▶ 3
- ▶ 2
- ▶ 1
- ▶ **0** (Page 81)

Question No: 11 (Marks: 1) - Please choose one

When a 32 bit number is divided by a 16 bit number, the quotient will be stored in

- ▶ **AX** (Page 85)
- ▶ BX
- ▶ CX
- ▶ DX

Question No: 12 (Marks: 1) - Please choose one

“mov byte [num1], 5” is _____ instruction.

- ▶ **legal** (Page 30) rep
- ▶ illegal
- ▶ stack based
- ▶ memory indirect

Question No: 13 (Marks: 1) - Please choose one

Which of the following options contain the set of instructions to open a window to the video memory?

▶ mov AX, 0xb008
mov ES, AX

▶ **mov AX, 0xb800**
mov ES, AX (Page 81) rep

▶ mov AX, 0x8b00
mov ES, AX
▶ mov AX, 0x800b
mov ES, AX

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Question No: 14 (Marks: 1) - Please choose one

The execution of the instruction “mov word [ES : 0], 0x0741” will print character “A” on screen, color of the character will be

- ▶ Black
- ▶ **White** (Page 81) rep
- ▶ Red
- ▶ Blue

Question No: 15 (Marks: 1) - Please choose one

Which of the following flags will be affected by MOVSW?

- ▶ DF
- ▶ PF
- ▶ ZF
- ▶ **No effect on flags**

Question No: 16 (Marks: 1) - Please choose one

Which bit of the attributes byte represents the blue component of background color ?

- ▶ 3
- ▶ **4** (Page 81)
- ▶ 5
- ▶ 6

MIDTERM EXAMINATION
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Question No: 1 (Marks: 1) - Please choose one

To transfer control back the RET instruction take

- ▶ 1 argument
- ▶ 1 argument
- ▶ **3 arguments** (Page 72) rep
- ▶ No arguments

Question No: 2 (Marks: 1) - Please choose one

In STOSB instruction SI is decremented or incremented by

- ▶ 4
- ▶ 1
- ▶ 2
- ▶ 3

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Question No: 3 (Marks: 1) - Please choose one

CMPS instruction subtracts the source location to the destination location.

Destination location always lies in

- ▶ **DS:SI** (Page 93)
- ▶ DS:DI
- ▶ ES:SI
- ▶ ES:DI

Question No: 4 (Marks: 1) - Please choose one

Regarding assembler, which statement is true:

- ▶ **Assembler converts mnemonics to the corresponding OPCODE** (Page 13)
- ▶ Assembler converts OPCODE to the corresponding mnemonics
- ▶ Assembler executes the assembly code all at once
- ▶ Assembler executes the assembly code step by step

Question No: 5 (Marks: 1) - Please choose one

If “BB” is the OPCODE of the instruction which states to “move a constant value to AX register”, the hexadecimal representation (Using little Endian notation) of the instruction “Mov AX,336” (“150” in hexadecimal number system) will be:

- ▶ 0xBB0150
- ▶ 0x5001BB
- ▶ 0x01BB50
- ▶ 0xBB5001

Question No: 6 (Marks: 1) - Please choose one

In the instruction MOV AX, 5 the number of operands are

- ▶ 1
- ▶ **2** (Page 25) rep
- ▶ 3
- ▶ 4

Question No: 7 (Marks: 1) - Please choose one

The maximum parameters a subroutine can receive (with the help of registers) are

- ▶ 6
- ▶ **7** (Page 72)
- ▶ 8
- ▶ 9

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Question No: 8 (Marks: 1) - Please choose one

In assembly the CX register is used normally as a _____ register.

- ▶ source
- ▶ **counter**
- ▶ index
- ▶ pointer

(Page 92) rep

Question No: 9 (Marks: 1) - Please choose one

All the addressing mechanisms in iAPX88 return a number called _____ address.

- ▶ **effective**
- ▶ faulty
- ▶ indirect
- ▶ direct

(Page 33) rep

Question No: 10 (Marks: 1) - Please choose one

When a 16 bit number is divided by an 8 bit number, the dividend will be in

- ▶ **AX**
- ▶ BX
- ▶ CX
- ▶ DX

(Page 85)

Question No: 11 (Marks: 1) - Please choose one

in Left-Shift-Operation the left most bit _____

- ▶ will drop
- ▶ **will go into CF**
- ▶ Will come to the right most
- ▶ will be always 1

(Page 52)

Question No: 12 (Marks: 1) - Please choose one

Suppose the decimal number "35" after shifting its binary two bits to left, the new value becomes _____

- ▶ 35
- ▶ 70
- ▶ 140
- ▶ 17

Question No: 13 (Marks: 1) - Please choose one

When divide overflow occurs processor will be interrupted this type of interrupt is called

- ▶ Hardware interrupt
- ▶ Software interrupt
- ▶ Processor exception
- ▶ Logical interrupts

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Question No: 14 (Marks: 1) - Please choose one

Which mathematical operation is dominant during the execution of SCAS instruction

- ▶ Division
- ▶ Multiplication
- ▶ Addition

▶ **Subtraction** (Page 92) rep

Question No: 15 (Marks: 1) - Please choose one

After the execution of REP instruction CX will be decremented then which of the following flags will be affected?

- ▶ CF
- ▶ OF
- ▶ DF

▶ **No flags will be affected** (Page 93) rep

Question No: 16 (Marks: 1) - Please choose one

_____ is one of the reasons due to which string instructions are used in 8088

- ▶ Efficiency and accuracy
- ▶ Reduction in code size and accuracy
- ▶ **Reduction in code size and speed**
- ▶ Reduction in code size and efficiency

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