MICROPROCESSOR MCQ BY …… I think You Know Who !

1-which of these are part from Block Diagram ?

a)Memory system b)microprocessor system c)I/O system d)all

2-memory system divided into ?

a)Transient Program Area (TPA) b) System Area c) Extended Memory System (XMS) d)all

3-is composed of three blocks that are interconnected by buses .

a)Memory system b)microprocessor system c)I/O system d)block diagram

4-is the set of common connections that carry the same type of information.

a)Memory system b)microprocessor system c)bus d)block diagram

5- XT computers contain …… KB of TPA and …… KB of system memory.

a)640,384 b)640,348 c)648,340

6- XT computers contains total memory size ….

a)640KB b)384KB c)1MB

7-In Memory , First 1 MB of memory often called the ……. memory system because each Intel microprocessors is designed to function in this area by using real mode of operation.

a) real b) conventional c)a & b d) AT class machines

8- 80286 through the Core2 contain also extended memory and they are often called ……

a) real b) conventional c)a & b d) AT class machines

9- AT class machines contains ….. ?

a)TPA b) System Area c) Extended Memory System (XMS) d)all

10- The size/length of the TPA is …… and it holds the ……. and other programs that control the computer system.

-The transit program data contain …… from total memory size.

a)640KB , RAM b)640KB , DOS c)384KB , DOS

11- is a DOS concept and not really applicable in Windows.

a)TPA b) System Area c) Extended Memory System (XMS)

12- TPA memory map (under DOS) shows:

a) How areas of TPA are used for system programs, data and drivers.
b) shows a large area of memory available for application programs
c) shows a small area of memory available for application programs
d) a & b

13-In TPA , To the left of each area is a …… that represents the ……. that begin and end each data area.

a)Binary Number , Memory Address b) hexadecimal number , Memory Address

14- is a collection of programs stored in either a Read–Only Memory (ROM) or flash memory that operates many of the I/O devices connected to your computer system.

a)BIOS b)IO.SYS c)COMMAND.COM d) Drivers

15- are programs that control installable I/O devices (mouse, hand scanner, CD/DVD) as well as programs.

a)BIOS b)IO.SYS c)COMMAND.COM d) Drivers

16- loads into the TPA from the disk whenever an MSDOS system is started.

a)BIOS b)IO.SYS c)COMMAND.COM d) Drivers

17- contains programs that allow DOS to use the keyboard, video display, printer and other I/O devices often found in computers.

a)BIOS b)IO.SYS c)COMMAND.COM d) Drivers

18- controls the operation of the computer from the keyboard when operated in the DOS mode.

a)BIOS b)IO.SYS c)COMMAND.COM d) Drivers

19- If the COMMAND.COM program is erased, the computer ……. from the keyboard in DOS mode.

a)can be used b)cannot be used c)both

20- Never erase ……. to make room for other software, or your computer will not function.

a)MSDOS.SYS b)IO.SYS c)COMMAND.COM d) all

21- Smaller than the TPA; its size is 384 KB ?

a)TPA b) System Area c) Extended Memory System (XMS)

22- contains programs on read–only memory (ROM) or flash memory, and areas of read/write memory (RAM) for data storage.

a)TPA b) System Area c) Extended Memory System (XMS)

23-In system area , area starts location ….. and extends to …….

a)A0000 , C7FFF b)AFFCFF , A0000 c)C7FFF , A0000

24-In system area, Memory at ……. stores text data.

a) C0000–BFFFF B) B0000–BFFFF c)BFFFF-B0000

25- The video BIOS on a ROM or flash memory, is at locations ……..contains programs to control DOS video display.

a) C0000–C7FFF b) C0000–C7FFA c) CAAAD-C7FFF

26- In system area , the system BIOS ROM is located in the top 64K bytes of the system area (F0000–FFFFF).

a)TRUE b)FALSE

27- The operating system (Windows) handles assigning physical memory to application and if not enough physical memory exists, it uses the hard disk for any that is not available.

a)TRUE b)FALSE

28- The physical memory of 8086 microprocessors is organized in …….memory banks of width .. and size …KB each.

a)two , 1B , 512 KB b)one , 1B , 512 KB c)Three , 2KB , 256KB

30- The 1 st bank is called odd or high bank, while the 2 nd is called the even or low bank.

a)TRUE b)FALSE

31 Data widths are variable and include a byte (8 bits), word ……byte, doubleword …….byte and quadwords …..bits

a)2 , 4 , 8 b)1 , 2 , 4 c)2 , 4 , 64

32- allow the microprocessor to communicate with the outside world.

a)Memory system b)microprocessor system c)I/O devices

33- I/O space in a computer system extends from I/O port 0000 to port FFFF.

a)TRUE b)FALSE

34- The microprocessor performs three main tasks for the computer system:

a) Data transfer between itself and the memory or I/O systems.
b) Simple arithmetic and logic operations
c) Program flow via simple decisions.
d) All

35- The power of the microprocessor is in its capability to execute billions of millions of instructions per second from a program stored in the memory system

a)TRUE b)FALSE

36- A common group of wires that interconnect components in a computer system.

a)MSDOS.SYS b)IO.SYS c)COMMAND.COM d)Buses

37- In most computer systems, there are four control bus connections:

- MRDC (Memory Read Control).

– MWTC (Memory Write Control).

– IORC (I/O Read Control).

– IOWC (I/O Write Control).

38- If the microprocessor needs to read a memory location it sends to the memory an address through the …. bus.

a)data b)address c)control

39- the data read from memory are passed to the microprocessor through the ……. bus.

a)data b)address c)control

40- Whenever a memory write, I/O write, or I/O read the different sequence occurs.

a)TRUE b)FALSE

41- In most computer systems, there are ……control bus connections

a)two b)three c)four d)five

LEC 2 MCQ BY ….. Are You Still Thinking Who is make that Ohh Nooo!

1-storage locations inside the microprocessors to temporarily store information.

a)Registers b)Controllers c)none

2- it can be specified by the instructions during applications programming , direct addressable .

a)program visible b)program invisible c)registers

3- it can't be addressable directly during applications programming, but it can be used indirectly.

a)program visible b)program invisible c)registers

4- The earlier 8086, 8088, and 80286 contain …… internal architectures.

a)8-bit b)16-bit c)32-bit d)64-bit

5- The 80386 through the Core2 microprocessors contain ….. internal architectures.

a)8-bit b)16-bit c)32-bit d)64-bit

6-Classification of internal registers ?

a)general purpose b)special purpose c)segment purpose d)all

7- registers are used for any purpose, as dictated by a program.

a)general purpose b)multipurpose c)special purpose d)all

8- register Used for instructions such as multiplication & division.

a) Accumulator b) Base index c) Count d) Data

9- EAX and RAX registers may also hold the offset address of a location in the memory system.

a)TRUE b)FALSE

10-the internal microprocessor registers are classified into ……. Groups

a)Two b)Three c)Four d)Five

11- The BX register holds offset address of a location in the memory system in all versions of the microprocessor.

a)TRUE b)FALSE

12- In the 80386 and above, the EBX and RBX registers can also address memory data.

a)TRUE b)FALSE

13- Holds the count for various instructions.

a) Accumulator b) Base index c) Count d) Data

14- Holds a part of the result from a multiplication or part of dividend before a division.

a) Accumulator b) source c) Count d) Data

15- Addresses the source string data for the string instruction

a) Accumulator b) source c) destination index d) Data

16- Addresses the destination string data for the string instructions.

a) base pointer b) source c) destination index d) Data

17- Points to a memory location in all versions of the microprocessor for memory data transfers.

a) base pointer b) source c) destination index d) Data

18- R8 through R15 registers: Only found in 64–bit microprocessor.

a)TRUE b)FALSE

19- The 8–bit portion is the leftmost 8–bit only.

a)TRUE b)FALSE

20-All Of these are general purpose registers (Accumulator register (RAX, EAX, AX, AH, AL) , Base index register (RBX, EBX, BX, BH, BL) , count(RCX, ECX, CX, CH, CL) , Data (RDX, EDX, DX, DH or DL), source-index (RSI, ESI, SI) , destination index (RDI, EDI, DI) , base-pointer (RBP, EBP, BP).

-special registers (Instruction Pointer , Stack Pointer ,FLAGS).

21- Used by the microprocessor to find the next instruction in a program located in a section of memory defined as the code segment.

- It can be modified with a jump or a call instruction.

a) Instruction Pointer b) Stack Pointer c) FLAGS

22-In stack pointer , Addresses an area of memory called the ……. segment.

a)code b)stack c)data

23- The data in …….. segment can be addressed or stored through this pointer.

a)code b)stack c)data

24- Used to indicate the state of the microprocessor and control its operations.

a) Instruction Pointer b) Stack Pointer c) FLAGS

25-Which reflects the result of arithmetic or logic operations.

a)status flag b)control flag c)none

26-Used to enable/disable certain operations of the processor.

a)status flag b)control flag c)none

27- Statues flags:(Overflow Flag , Sign Flag , Zero Flag , Parity Flag , Carry Flag , Auxiliary Flag ,)

28- Occurs when signed numbers are added or subtracted.

a)Overflow Flag b) Sign Flag c) Zero Flag d)Parity Flag e)Carry Flag f) Auxiliary Flag

29- An/a …….. indicates the result has exceeded the capacity of the machine.

a)Overflow Flag b) Sign Flag c) Zero Flag d)Parity Flag e)Carry Flag f) Auxiliary Flag

30- Indicates the sign of numbers, if negative this flag is set to 1 (0 = positive, 1 = negative).

a)Overflow Flag b) Sign Flag c) Zero Flag d)Parity Flag e)Carry Flag f) Auxiliary Flag

31- shows that the result of an arithmetic or logic operation is zero. If Z = 1, the result is zero; if Z = 0, the result is not zero.

a)Overflow Flag b) Sign Flag c) Zero Flag d)Parity Flag e)Carry Flag f) Auxiliary Flag

32- Indicates if the number of set bits is odd or even in the binary representation.

a)Overflow Flag b) Sign Flag c) Zero Flag d)Parity Flag e)Carry Flag f) Auxiliary Flag

33- It holds the carry after addition or the borrow after subtraction.

a)Overflow Flag b) Sign Flag c) Zero Flag d)Parity Flag e)Carry Flag f) Auxiliary Flag

34- holds a carry (half–carry) after addition or a borrow after subtraction between bit positions 3 and 4 of the result.

a)Overflow Flag b) Sign Flag c) Zero Flag d)Parity Flag e)Carry Flag f) Auxiliary Flag

35-Control flags :(Direction Flag , Interrupt Flag , Trap Flag ,)

37- Selects either the increment or decrement mode for the DI and/or SI registers.

a)Direction Flag b)Interrupt Flag c)Trap Flag

38-In Direction flag , If D = ….., the registers are decremented; if D = …, the registers are incremented.

a)0 , 1 b)1,0 c)1,2

39- Controls operation of the INTR (interrupt request) input pin.

- If set (1) means that the microprocessor will recognize interrupt requests from the peripherals. If it (0) means that the microprocessor will not recognize any interrupt requests and will ignore them.

a)Direction Flag b)Interrupt Flag c)Trap Flag

40- enables trapping and puts the microprocessor into single step mode for debugging the program to find the errors.

a)Direction Flag b)Interrupt Flag c)Trap Flag

41-In Trap flag , If the T = …., the microprocessor interrupts the flow of the program, if T = …, the debugging feature is disabled.

a)0 , 1 b)1,0 c)1,2

42- Segment Registers:(Code Segment register , Data Segment register , Extra Segment register , Stack Segment register)

43- Holds the code used by the microprocessor. Defines the starting address of the section of memory that contains code to be executed.

a)Code Segment register b) Data Segment register c)Extra Segment register d)Stack Segment register

44- The code segment is limited to …….. in the 8086–80286.

a)65kB b)32KB c)64KB

45- Define the starting address of the data memory segment that contains program data.

a)Code Segment register b) Data Segment register c)Extra Segment register d)Stack Segment register

46- Data are accessed in the data segment by an /a……. or the contents of other registers that hold the offset address.

a) offset address b)data address c)object address

47- Data segment length is limited to …… in the 8086–80286.

a)65kB b)32KB c)64KB

48- Define the starting address of the extra data memory segment that contains additional data segment used to hold destination data.

a)Code Segment register b) Data Segment register c)Extra Segment register d)Stack Segment register

49- Define the starting address of the stack memory segment that contains stack data.

a)Code Segment register b) Data Segment register c)Extra Segment register d)Stack Segment register

50- Stack entry is determined by the stack segment and stack pointer registers.

a)True b)False

MCQ LEC 3 , you are good student because u here right now so if you know who is create this file you will be a grate Engineer in the future .

1-operation allows the microprocessor to address of only the first 1 MB of memory space.

a)protected mode b)real mode c)both

2-8086 & 8088 operate exclusively in the …….mode.

a)protected mode b)real mode c)both

3- 80286 and above microprocessor operates in …

a)protected mode b)real mode c)both

4- The segment address located within one of the segment registers and defines the beginning address of any 64 KB memory segment after appended by 0H on its rightmost end. This forms a 20–bit memory address, allowing it to access the start address of a segment.

a)True b)False

5- Selects any location within the 64 KB memory segment.

a)segment address b)offset address c)absolute address

6- n–bit value that directly references a specific location in memory.

a)segment address b)offset address c)absolute address

7- Combines the starting address of a segment with an offset value which is called the …..

a)segment address b)offset address c)logical address

8- All real mode memory addresses consist of a segment address plus an offset address

a)True b)False

9- memory segment can touch or even overlap if 64 KB of memory are not …… for a segment.

a)allow b)required c)enough b)none of the above

10- Segment plus offset addressing allows DOS programs to be relocated in memory.

a)True b)false

11- can be placed into any area of memory and executed without change.

a) relocatable program b) relocatable data c)none

12- are data that can be placed in any area of memory and used without any change to the program.

a) relocatable program b) relocatable data c)none

13 Allows access to data and programs located above the first 1 MB of memory, as well as within the 1 st 1 MB.

a)protected mode b)real mode c)both

14-In protected mode , the segment register contains a selector that selects a descriptor from a descriptor table.

a)True b)false

15- describes the memory segment's location, length and access rights.

a)selector b)descriptor c)RPL d)TI

16- selects either the global or the local descriptor table.

a)selector b)descriptor c)RPL d)TI

17- If privilege levels are ……., system normally indicates a privilege level violation.

a)not violated b)violated c)allows d)none

18- requests the access privilege level of a memory segment.

a)selector b)descriptor c)RPL d)TI

19- directly, the register still selects a memory segment, but not indirectly as in real mode.

a)True b)false

20- contain segment definitions that apply to all programs.

a)Local descriptor b)Global descriptor c)both

21- are usually unique to an application.

a)Local descriptor b)Global descriptor c)both

22- tables are found in the memory system

a)Local descriptor b)Global descriptor c)both

23- Each descriptor is …. bytes in length, so the global and local descriptor tables are each a maximum of …. KB in length.

a)16-512 b)8-64 c)32-64 d)32-512

24- Descriptor zero is called the null descriptor, must contain all zeros, and may not be used for accessing memory.

a)True b)false

25- • If G=….., the limit specifies a segment limit of 00000H to FFFFFH.

a)1 b)0 c)none

26- If G=….., the value of the limit is multiplied by 4 KB (appended with FFFH). The limit is then 00000FFFH to FFFFFFFFH.

a)1 b)0 c)none

27- The D bit, allows operate in a 16–bit instruction mode when D=….. or 32–bit instruction mode when D=…..

a)1 , 0 b)0 , 1 c)none

28- The AV bit, in the 80386 and above descriptor, is used by some operating systems to indicate that the segment is available (AV=1) or not available (AV=0).

a)True b)false

29-If P= 1 , the segment contains valid ?

a)base b)limit c)descriptor undefined d)both a&b

30-If E=0 , the descriptor describe ?

a)data segment b)code segment c)both

31-If A=0 , the segment will be ….

a)accessed b)not accessed c)both

32-when S=1 , that's means ?

a)code descriptor b)data descriptor c)code or data descriptors

33-when E=1 , I will using ?

a)R , C b)ED , W c)none

34- For an 80286 descriptor that contains 0000F3ABCDEF6789H .

1-what's the starting location addressed by this descriptor?

a)0000F3H b)F3ABCDH c)EF6789H d)ABCDEFH

2-Memory segment is a..... segment

a)Code b)Data c)System d)none

3-Descriptor privilege level is ...

a)0 b)1 c)2 d)3

4-This Segment contain valid.....

a)Limit b)Base c)a & b d)none

5-This Segment is ..... before

a)Not accessed b)Accessed c)All of the above d)none

6-This Segment grows ……. in memory

a)upward b)downward c)both

35- For Intel 8086 microprocessor , determine the memory location addressed by the following ABCD:78EF.

a)B46CFH b)C027FH c)124BCH d)B35BFH

36- If the DS register contains 0105H in a protected mode system .

1-Which descriptor table is accessed ?

a)Local b)Global c)Both d)none

2-The Requested Privilege level "RPL" is ....

a)0 b)1 c)2 d)3

3-Which entry from the descriptor table is selected?

a)32H b)16H c)20H d)24H

37- The parity flag for a number contains 3 bits set to one will be …

a)one b)zero c)none

38- The 8086 microprocessor using registers that are ….. bit wide

a)16 b)32 c)64

39- The registers with the 8086–Core2 is considered to be ….. or …..

a)program visible or invisible b)stack or segment c)16 or 32

Lec 4 , I know my file it's very amazing like me .

1-instruction is used to describe the data addressing modes.

a)MOV b)DEL c)SUB

2- tells the microprocessor which operation to perform.

a)operands b)opcode c)none

3- The instruction always copies the source data into the destination.

a)True b)false

4- The MOV actually picks up the data and moves it.

a)True b)false

5- The source never changes, but the destination always changes.

a)True b)false

6- This is even true when a move from small register to big one.

a)True b)false

7- The flag register remains unaffected by MOV instruction.

a)True b)false

8- A segment–to–segment register MOV instruction is allowed.

a)True b)false

9- Changing the CS register with a MOV instruction is not allowed.

a)True b)false

10- The Register Addressing Is the most common form of data addressing.

a)True b)false

11- In the 80386 and above, a doubleword can be transferred from the source register to the destination register.

a)True b)false

12- MOV BX,CX instruction does affect the leftmost 16 bits of register EBX.

a)True b)false

13- data immediately follow the hexadecimal opcode in the memory , note that immediate data are constant data , memory location are variable data.

a) Immediate Addressing b) Direct Addressing c)Displacement Addressing

14- Applied to many instructions in a typical program.

a) Immediate Addressing b) Direct Addressing c)Displacement Addressing

15- There are ….. basic forms of direct data addressing.

a)3 b)2 c)5

16- ……..applies to a MOV between a memory location and AL, AX, or EAX.

a) Immediate Addressing b) Direct Addressing c)Displacement Addressing

17- ……applies to almost any instruction in the instruction set.

a) Immediate Addressing b) Direct Addressing c)Displacement Addressing
d) Register Indirect Addressing

18- MOV AL,DATA loads AL from the data segment memory location DATA (1234H). DATA is a symbolic memory location, while 1234H is the actual hexadecimal location.

a)True b)false

19- Displacement addressing, almost identical to direct addressing, except the instruction is … bytes wide instead of ….

a)3 , 4 b)4 , 5 c)4 , 3

20- In 80386 through Pentium 4, this instruction can be up to … bytes wide if a 32–bit register and a 32–bit displacement are specified.

a)20 b)7 c)32

21- This type of direct data addressing is much more flexible because most instructions use it.

a)True b)false

22- Allows data to be addressed at any memory location through an offset address held in any of the following registers: BP, BX, DI, and SI.

a) Immediate Addressing b) Direct Addressing c)Displacement Addressing
d) Register Indirect Addressing

23- 80386 and above allow register indirect addressing with any extended register except ESP.

a)True b)false

24- In some cases, indirect addressing requires specifying the size of the data by the special assembler directive , These directives indicate the size of the memory data addressed by …….

a)PTR b)RTP c)RPL

25- For the 80386 and above, EBP addresses memory in the stack segment by default.

a)True b)false

26-

CS	**IP**
DS	BX-DI-SI
SS	BP-SP

This table is important to solve the questions on MOV please remember it when you see this type of this questions ,

27-Suppose DS=0200H , BX =0300H , DI=400H , determine memory address location , by each of the following instructions , assuming real mode operation

a)MOV AL,[1234H]

solution :DS*10+1234=0200*10*1234=03234H

28- Q4) Suppose that CS = 0300H, DS = 0200H, ES = 0400H, SS = 0100H, BX = 0350H, BP = 0500H, SI = 0700H and LIST = 0450H. Assuming the real mode of operation, find the memory address accessed by:

a) MOV RAX,LIST[BX+1234].
b) MOV [BP+SI],AL.

a)solution : DS*10+LIST+BX+1234 = 0200*10+0450+0350+1234=039D4H

b)Solution :SS*10+BP+SI = 0100*10+0500+0700=01C00H

Everything here is By The Magnificent Amr Amin