MULTIPLE CHOICE QUESTIONS (MCQ's)

1. What is operand?
   (a) Machine code (b) Data
   (c) Machine code of instruction (d) None of these
2. What is opcode?
   (a) Machine code (b) data
   (c) Machine code of instruction (d) None of these
3. Which addressing mode is fastest in 80386 microprocessor?
   (a) Immediate addressing (b) Register addressing
   (c) Direct memory addressing (d) Register indirect addressing
4. Which register cannot be used in register indirect addressing mode?
   (a) ESI (b) EBX
   (c) EBP (d) ESP
5. In 80386 microprocessor for 32-bit operand and instructions, which registers can be used as base register?
   (a) ESX, EBP (b) ESI, EDI
   (c) both (a) and (b)
   (d) All general purpose registers except ESP
6. In 80386 microprocessor, for 32-bit operand and instructions which registers can be used as index registers?
   (a) EBX, EBP (b) ESI, EDI
   (c) both (a) and (b)
   (d) All general purpose registers except ESP
7. For real mode of 80386, calculate physical address of the operand present in the following instruction :

   MOV AX, [BX] [DX * 2]

   Given : AX = 2000H, DX = 3000H, DS = 1000H, CS = 2000H
   (a) 28000H (b) 09000H
   (c) 18000 H (d) 0A000H
8. What is the addressing mode of MOV AX, [SI] instruction?
   (a) Indexed addressing mode (b) Register indirect addressing mode
   (c) Indirect addressing mode (d) All of above
9. What is the addressing mode of MOV AX, [BP] [DI]?
   (a) Based addressing mode (b) Register indirect addressing mode
   (c) Indexed addressing mode (d) Based Indexed addressing mode
10. Which of the following is an illegal instruction?
   (a) MOV AX, 3000 (b) INC Al,1
   (c) aNd bx,bx (d) add ax,30

11. Given that the BL register contains ASCII value of ‘B’, which of the following instructions will change BL so that it contains ASCII value of 'b'
    (a) or bl, 0010 0000
    (b) and bl, 0010 0000
    (c) or bl, 1101 1111
    (d) and bl,1101 1111
12. Given that the BL register contains ASCII value of ‘b’, which of the following instructions will change BL so that it contains ASCII value of 'B'
    (a) or bl, 0010 0000
    (b) and bl, 0010 0000
    (c) or bl, 1101 1111
    (d) and bl,1101 1111
13. Which of the following is an illegal instruction?
    (a) MOV Ax, 30000
    (b) iNc Al
    (c) aNd bx, bx
    (d) add ax, 30
14. Which of the following is an illegal 80386 instruction
    (a) mov 20, bx
    (b) iNc Al
    (c) aNd bx, bx
    (d) add ax, 30
15. Which of the following is an illegal 80386 instruction?
    (a) mov ax, [bx]
    (b) iNc [bx]
    (c) aDd bx, [bx]
    (d) add ax, [cx]
16. The net effect of calling the following subprogram in terms of program behavior is to ……

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MOV AX, 8000H
MOV BX, AX
PUSHAX
POP BX
ADD BX, 10
PUSH BX
POP AX
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    (a) leave ax unchanged
    (b) add 10 to ax
    (c) cause the program to behave in an unpredictable manner
    (d) do nothing
17. A conditional jump instruction
    (a) always cause a transfer of control
    (b) always involves the use of the status register
    (c) always modifies the program counter
    (d) always involves testing the Zero flag
18. An interrupt instruction
    (a) causes an unconditional transfer of control
    (b) causes a conditional transfer of control

(c) modifies the status register
(d) is an I/O instruction

19. A data movement instruction will
    (a) modify the status register
    (b) modify the stack pointer
    (c) modify the program counter
    (d) transfer data from one location to another
20. The read/write line is
    (a) belongs to the data bus
    (b) belongs to the control bus
    (c) belongs to the address bus
    (d) CPU bus
21. The instruction INC I where I is a memory variable involves ……
    (a) a memory read operation
    (b) a memory write operation
    (c) a memory read and a memory write operation, arithmetic operation
    (d) only an arithmetic operation
22. A hardware interrupt is ……
    (a) also called an internal interrupt
    (b) also called an external interrupt
    (c) an I/O interrupt
    (d) a clock interrupt
23. An assembly language program is typically ……
    (a) non-portable
    (b) shorter than an equivalent HLL program
    (c) harder to read than a machine code program
    (d) slower to execute than a compiled HLL program
24. An assembly language program is translated to machine code by ……
    (a) an assembler (b) a compiler
    (c) an interpreter (d) a linker
25. An assembly language directive is ……
    (a) the same as an instruction
    (b) used to define space for variables
    (c) used to start a program
    (d) to give commands to an assembler
26. Which of the following is not an TASM directive
    (a) .stack (b) db

(c) .model (d) call

27. When a program is translated by the TASM assembler, the machine code is stored in a file with the extension
    (a) .lis (b) .obj
    (c) .exe (d) .out
28. 167a. The output of the linker (LINK command) is stored in a file with the extension
    (a) .lis (b) .obj
    (c) .exe (d) lnk
29. The call instruction is used to
    (a) access subprograms (b) access memory
    (c) perform I/O (d) access the stack
30. The effect of the following instructions

    push ax
    add ax, 4
    pop bx
    mov cx, ax
    push bx
    pop ax

    on the ax register is
    (a) leave it with its original value (b) add 4 to it
    (c) clear it (d) double it
31. What is the effect of the following instructions?
    mov ah, 2h
    int 21h
    (a) read a character into al (b) read a character into dl
    (c) display the character in al (d) display the character in dl
32. What is the effect of the following instructions

    mov ah, 1h
    int 21h
    (a) read a character into al (b) read a character into dl
(c) display the character in al (d) display the character in dl
33. Given that al contains the ASCII code of an uppercase letter, it can be converted to lowercase

    by
    (a) add al,32 (b) sub al, 32
    (c) or al, 1101 1111 (d) and al, 0010 0000
34. Given that al contains the ASCII code of a lowercase letter, it can be converted to uppercase by

(a) add al, 32 (b) sub al, 32

(c) or al, 1101 1111 (d) and al, 0010 0000

35. Given that al contains the ASCII code of an uppercase letter, it can be converted to lowercase by

(a) add al,30 (b) sub al, 30

(c) or al, 0010 0000 (d) and al, 0010 0000

36. Given that al contains the ASCII code of a lowercase letter, it can be converted to uppercase by

(a) add al, 32 (b) sub al, 30

(c) or al, 1101 1111 (d) and al, 1101 1111

37. The instruction JG operates with

(a) unsigned numbers (b) 2's complement numbers

(c) floating point numbers (d) ASCII codes

38. The instruction JA operates with

(a) unsigned numbers (b) signed numbers

(c) floating point numbers (d) ASCII codes

39. The instruction mov str[si],'a' is an example of

(a) indirect addressing (b) indexed addressing

(c) direct addressing (d) register addressing

40. The instruction mov ax, [bx] is an example of

(a) indirect addressing (b) indexed addressing

(c) direct addressing (d) based addressing

41. The instruction JE label is an example of

(a) indirect addressing (b) indexed addressing

(c) relative addressing (d) immediate addressing

42. The call instruction stores the return address for a subprogram

(a) on the stack (b) in the memory address register

(c) in the CS:IP (d) does not involve using the return address

43. Given that dl contains 'x' which of the following will cause 'x' to be displayed:

(a) mov ah, 1h, int 21h (b) mov ah, 2h, int 21

(c) mov ah, 2h, int 21h (d) mov ah, 0h, int 21h

44. Which of the following will read a character into al?

(a) mov ah, 1h, int 21 (b) mov ah, 2h, int 20h

(c) mov ah, 2h, int 21h (d) mov ah, 1h, int 21h

45. Which of the following will display a string whose address is in the DX register?

(a) mov ah, 0h ; int 21h (b) mov ah, 2h; int 21h

(c) mov ah, 9h ; int 21 (d) mov ah, 9h; int 21h

46. Which of the following will terminate a program and return to MS-DOS?
    (a) mov ax,4c00h; int 21h (b) mov ax,4c00h; int 20h
    (c) mov dx,4c00h; int 21h (d) mov ax, 9h ; int 21h
47. The CMP instruction modifies the
    (a) IP or CS: IP (b) destination register
    (c) flag register (d) segment register
48. Conditional instructions typically inspect the
    (a) IP or CS: IP (b) destination register
    (c) flag register (d) accumulator
49. The call instruction modifies
    (a) the flags register (b) IP or CS: IP
    (c) BP register (d) none of the these
50. The call instruction modifies
    (a) the flags register (b) stack pointer
    (c) BP register (d) none of the these
51. The call instruction modifies
    (a) IP or CS: IP and SP register (b) flags register
    (c) BP register (d) none of the previous
52. The ret instruction modifies the
    (a) IP or CS: IP and SP register (b) flags register
    (c) BP register (d) none of the previous
53. The contents of different registers are given below. Form Effective addresses for different addressing modes of real mode of 80386

    Given: Offset = 5000H, [AX]- 1000H, [BX]- 2000H, [SI]- 3000H, [DI]- 4000H, [BP]- 5000H, [SP]- 6000H, [CS]- 0000H, [DS]- 1000H, [SS]- 2000H, [IP]- 7000H.

I. MOV AX, [5000H]
    (a) 5000H (b) 15000H
    (c) 10500H

II. MOV AX, [BX] [SI]
    (a) 13000H (b) 15000H
    (c) 12000H

III. MOV AX, 5000H [BX] [SI]
    (a) 20000H (b) 1A000H

(c) 1A00H

54. The conditional branch instruction JNS performs the operations when if __
    (a) ZF =0
    (b) SF=0
    (c) SF=1
    (d) CF=0
55. What is the output of the following code?
    MOV AL,88H ;88H is BCD number
    MOV CL,49 ; 49H is BCD number
    ADD AL, CL
    DAA
    (a) D7, CF=1
    (b) 37, CF=1
    (c) 73, CF=1
    (d) 7D, CF=1
56. What is the output of the following code?
    MOV AL, 49H ; 49H is BCD number
    MOV BH,72H ; 72H is BCD number
    SUB AL, BH
    DAS
    (a) AL=D7, CF=1.
    (b) AL=7D, CF=1.
    (c) AL=77, CF=1
    (d) none of them
57. What is the output of the following code?
    MOV AL, -28
    MOV BL,59
    IMUL BL
    AX=? , MSB=?
    (a) AX= F98CH, MSB=1
    (b) AX= 1652, MSB=1.
    (c) BX F9C8H, MSB=1
    (d) BX= 1652, MSB=1
58. What is the output of the following code?
    MOV AL, 00110100B
    MOV BL, 00111000B
    ADD AL, BL
    AAA
    (a) AL = 6CH
    (b) AX=0102H
    (c) AX=0012 H
    (d) AL=C6H
59. What is the output of the following code?
    MOV AL,00110101B
    MOV BL, 39H
    SUB AL, BL
    AAS
    (a) AL= 00000100, CF=1
    (b) BL=00000100, CF=0
    (c) AL=11111100 CF=1
    (d) BL=00000100, CF=1

60. What is the output of the following code?
    CLC
    MOV BH,179
    RCL BH, 1
    (a) CF=0, OF= 1, BH= 01100101
    (b) CF=1, OF=1, BH=01100110
    (c) CF=1, OF =0, BH= 01001101
    (d) CF=0, OF=0, BH=00101100
61. What is the output of the following code?
    MOV SI,10010011 10101101B
    CLC
    SHR SI, 1
    (a) 37805, CF=1, OF=1
    (b) 18902, CF=1, OF=1
    (c) 19820, CF=1, OF=1
    (d) 53708, CF=1, OF=1
62. What is the output of the following code?
    MOV BX,23763
    MOV CL,8
    ROL BX, CL
    (a) 0101110011010011, CF=0
    (b) 1101001101011100, CF=0
    (c) 0110100010011101, CF=1
    (c) 1011100110001100, CF=1
63. What is the output of the following code?
    PUSHAL
    (a) Decrement SP by 2 & push a word to stack
    (b) Increment SP by 2 & push a word to stack
    (c) Decrement SP by 2 & push a AL to stack
    (d) Illegal
64. What is the output of the following code?
    MOV AX, 37D7H,
    MOV BH, 151
    DIV BH
    (a) AL = 65H, AH= 94 decimal
    (b) AL= 5EH, AH= 101 decimal
    (c) AH= E5H, AL= 5EH
    (d) AL= 56H, AH= 5EH
65. In 8086 microprocessor one of the following instructions is executed before an arithmetic Operation
    (a) AAM
    (b) AAD
    (c) DAS
    (d) DAA
66. The negative numbers in the binary system can be represented by
    (a) Sign magnitude
    (b) I's complement
    (c) 2's complement
    (d) All of the above
67. Pseudo instructions are
    (a) Machine instructions
    (b) Logical instructions
    (c) Micro instructions
    (d) instructions to assembler
68. The errors that can be pointed out by the assembler are ……

(a) Syntax errors (b) Semantic errors
(c) Logical errors (d) None of the above

69. An assembly language program is translated to machine code by
(a) an assembler (c) an interpreter
(b) a compiler (d) a linker

70. Which of the following, when used in the data section of a MASM program, reserves 40 bytes of RAM (memory)?
(a) BYTE 20 DUP (2) (c) WORD 40 DUP (1)
(b) BYTE 20 DUP (20) (d) WORD 20 DUP (2)

71. The instruction MOV CL, [BX][DI]+8 represents the following addressing mode ……
(a) based relative (b) based indexed
(c) indexed relative (d) register indirect

72. IF CX =1234H and BX=75FDH what is the value stored in CX after the execution of the following instruction:
TEST CX, BX
(a) 1234H (b) 77FDH
(c) 75FDH (d) 1032H

73. What does the INT_n instruction push onto the stack that the CALL instruction does not?
(a) Segment Address (b) Flags
(c) Offset Address (d) None of above

74. The 2's compliment of a binary no. is obtained by adding …… to its 1's compliment.
(a) 0 (b) 1
(c) 10 (d) 12

75. The symbols used in an assembly language are ……
(a) Codes (b) Mnemonics
(c) Assembler (d) None of the above

76. ASCII stands for
(a) American standard code for information interchange
(b) All-purpose scientific code for information interchange
(c) American security code for information interchange
(d) American Scientific code for information interchange

77. Which is not an operand?
(a) Variable (b) Register
(c) Memory location (d) Assembler

Answers

1. (b)	2. (c)	3. (a)	4. (d)	5. (d)	6. (d)	7. (c)	8. (d)	9. (d)	10. (b)
11. (a)	12. (d)	13. (a)	14. (a)	15. (d)	16. (b)	17. (b)	18. (a)	19. (d)	20. (b)
21. (c)	22. (b)	23. (b)	24. (a)	25. (d)	26. (d)	27. (b)	28. (c)	29. (a)	30. (a)

31. (d)	32. (a)	33. (a)	34. (b)	35. (c)	36. (d)	37. (b)	38. (a)	39. (b)	40. (d)
41. (c)	42. (a)	43. (c)	44. (d)	45. (d)	46. (a)	47. (c)	48. (c)	49. (b)	50. (b)
51. (a)	52. (a)	53. (b)	54. (b)	55. (b)	56. (c)	57. (a)	58. (b)	59. (a)	60. (b)
61. (b)	62. (b)	63. (d)	64. (b)	65. (b)	66. (c)	67. (a)	68. (a)	69. (a)	70. (d)
71. (b)	72. (a)	73. (b)	74. (b)	75. (b)	76. (a)	77. (d)			