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QUESTION BANK (OBJECTIVE)

Subject with Code : (16EC423)

Course & Branch: B.Tech – CSE

Year & Sem: III-B.Tech & II-Sem

Regulation: R16

UNIT –I

INTRODUCTION TO MICROPROCESSOR

1. Supply voltage 'VCC' of 8085 μ p is.....volts []
A) 2 B) 3 C) 4 D) 5
2. The address bus flow in _____ []
A) Bidirectional B) unidirectional
C) Multidirectional D) Circular
3. The first part of an instruction which specifies the task to be performed by the computer is called _____ []
A) opcode B) operand C) Both D) None
4. Number of T-states required to execute the instruction MOV L,H is []
A) 10 B) 4 C) 7 D) 13
5. 8085 μ p has no. of instructions. []
A) 246 B) 256 C) 266 D) 286
6. In 8085 μ p the no. of hardware interrupts are _____ []
A) 5 B) 7 C) 8 D) 9
7. Status register is also called as _____ []
A) Accumulator B) Stack C) Counter D) flags
8. The address / data bus in 8085 is _____ []
A) Multiplexed B) de-multiplexed C) decoded D) loaded
9. Total no. of pins in 8085 μ p is ____ []
A) 21 B) 27 C) 29 D) 40
10. PUSH and POP instructions are related to .. []
A) Program counter B) queue C) stack D) DMA controller
11. The status of S0 and S1 pins for memory write is. []
A)0, 0 B)0,1 C)1,0 D)1,1
12. The status of S0 and S1 pins for memory read is. []
A)0, 0 B)0,1 C)1,0 D)1,1
13. The status of S0 and S1 pins for I/O write is. []
A)0, 0 B)0,1 C)1,0 D)1,1
14. The status of S0 and S1 pins for I/O read is. []
A)0, 0 B)0,1 C)1,0 D)1,1
15. The second part of the instruction is the data to be operated on, and it is called []
A) opcode B)operand
C) Instruction cycle D) Mnemonic
16. The status of S0 and S1 pins for Opcode fetch is. []
A)0, 0 B)0,1 C)1,0 D)1,1
17. Which of the following is the fastest memory element? []
A) Cache B) RAM C) ROM D) register
18. The no. of address lines required to address a memory of size 32 K is []
A) 15 lines B) 16 lines C) 18 lines D) 14 lines
19. The stack is a specialized temporary access memory duringinstructions []
A)random, store, load B)random, push, load
C)sequential, store, pop D)sequential, push, pop

21. The basic operation done in the instruction CMP is..... []
A) OR B) AND C) XOR D) SUB
22. The instruction PUSH BX indicates... []
A) Decrement SP by 2 B) Decrement SP by 2
C) Decrement SP by 1 D) Decrement SP by 1
23. In 8086 IP will act as... []
A) Program counter B) stack pointer
C) Base pointer D) data pointer
24. The index register are used to hold _____ []
A) Memory register B) offset address C) segment memory D) offset memory
25. The segment register are used to hold _____ []
A) Base address B) offset address C) segment memory D) offset memory
26. Status register is also called as _____ []
A) Accumulator B) Stack C) Counter D) flags
27. The 8086 fetches instruction one after another form ____ segment of memory []
A) Code B) Data C) Extra D) Stack
28. The size of the address bus in 8086 microprocessor is....bits. []
A) 8 B) 16 C) 20 D) 64
29. 8086 microprocessor consists of vectored interrupts []
A) 236 B) 246 C) 256 D) 276
30. In 8086, "INC" instruction increases the contents of specified register or memory location by []
A) 1 B) 2 C) 3 D) 4
31. _____ is the most important segment and it contains the actual assembly language instructions to be executed by the microprocessor. []
A) Code segment B) Base segment C) Stack segment D) Extra segment
32. The clock frequency of 8086-I processor is []
A) 3 MHZ B) 5 MHZ C) 8 MHZ D) 10 MHZ
33. Base Pointer (BP) contains offset address of _____ segment. []
A) Code segment B) Base segment C) Stack segment D) Extra segment
34. If segment address = 1005 H, offset address = 5555 H, then the physical address is []
A) 655A H B) 155A5 H C) 4550 H D) 56555H
35. Which of the following is a 16-bit register: []
A) CL B) BL C) AX D) All the above
36. The BIU prefetches the instruction from memory and store them in----- []
A) Queue B) Register C) Memory D) Stack
37. If _____ flag is set; the processor enters the single step execution mode. []
A) Zero B) Direction C) Trap D) Interrupt
38. 8086 processor operates in __modes []
A) 1 B) 2 C) 3 D) 4
39. Parity flag will be set, when the result has an []
A) Even no.of ones B) odd no.of ones C) both D) none
40. Auxiliary carry flag is used during []
A) hex-decimal addition B) BCD addition C)binary addition D)all of the above

UNIT – III INTRODUCTION TO MICROCONTROLLERS

1.are the processor chips that generally have memory, input ports and Output ports within the chip itself []
A) Microprocessor B) Microcontroller C) NOC D) none
2. The size of the data bus of 8051 microcontroller is []
A) 8 bits B) 4 bits C) 16 bits D) 32 bits
3. Intel 8051 containsports and16-bit timers []
A)4,2 B)2,4 C)1,3 D)3,1

4. The on-chip crystal oscillator frequency in 8051 microcontroller is []
 A) 8 MHZ B) 10 MHZ C) 12 MHZ D) 5 MHZ
5. The number of 16-bit timers present in 8051 microcontroller are___ []
 A) 2 B) 3 C) 4 D) 5
6. In 8051 microcontroller, the total number of pins available are____. []
 A) 20 B) 30 C) 40 D) 50
7. The size of the ROM in 8051 microcontroller is []
 A) 32- KB B) 64-KB C) 4KB D) 16-KB
8. The size of the address bus in 8051 microcontrollers is__bits []
 A) 8 B) 16 C) 32 D) 64
9. 8051 microcontroller consists of __general purpose registers. []
 A) 8 B) 16 C) 32 D) 64
10. The internal RAM memory of the 8051 is: []
 A) 32-bytes B) 64-bytes C) 128-bytes D) 256-bytes
11. Register bank can be selected by.....bits in the flag register []
 A)P B)OV C)F0 D)RS0 and RS1
12. The address range of bank3 in 8051 []
 A)00H-07H B)08H-0Fh C)10H-17H D)18H-1Fh
13. The microcontroller enters the idle mode whenever... []
 A) PCON.0 bit is 0 B) PCON.0 bit is 1
 C)SCON.0 bit is 0 D)SCON.0 bit is 1
14. Power down mode is initiated by making... []
 A) PCON.0 bit is 0 B) PCON.0 bit is 1
 C)PCON.1 bit is 0 D)PCON.1 bit is 1
15. The stack pointer in 8051 is an 8-bit register within the SFR with address... []
 A)80H B)81H C)82H D)84H
16. MOVCA, @A+DPTR is an example of Addressing mode []
 A) Immediate B) Register direct C) Memory indirect D) Indexed
17. The mnemonics of Call subroutine at PC:addr is []
 A)LCALL addr B)ACALL 11-bit addr
 C)LJMP addr D)AJMP 11-bit addr
18.port of 8051 is used exclusively for input and output operations []
 A)1 B)2 C)3 D)4
19. If the signal EA (active low) of 8051 is not accessed []
 A) Internal program B) external program
 C) Internal data D) external data
20. If the timer registers are incremented by the internal clock pulses from microcontrollers, the operation is called... []
 A) Counting B) timing C) both D) none
21. SFR address of TMOD is []
 A) 8CH B) 8AH C) 89H D) 8BH
22. Timer mode 0 is a....timer []
 A) 12-bit B) 11-bit C) 13-bit D) 15-bit
23. Mode 3 of timer in 8051 is...timer mode []
 A) 13-bit B) 16-bit C) split D) Timer auto reload
24. 8051 has... interrupts []
 A) 2 B) 3 C) 4 D) 5
25. Interrupt priorities of 8051 can be controlled by... []
 A) TCON B) PCON C) IP D) SP
26. D0 bit of IE register in 8051 is: []
 A) ES B) EA C) ET1 D) EX0
27. D1 bit of TCON register in 8051 is []
 A) IE0 B) IT1 C) TF1 D)TF0
28. The technique of having the same address for two different registers is called.... []

- A) Single Buffering B) double buffering C) both D) none
29. Transmission in 8051 is initiated by writing a data to theSFR register []
 A) TCON B) PCON C) SBUF D) IP
30. MSB bit of... register is used to double the baud rate of serial transmission and reception []
 A) TCON B) PCON C) SBUF D) IP
31. ... andBits of SCON register define the operating modes of the serial port []
 A) D1 and D2 B) D7 and D6
 C) D4 and D5 D) D2 and D3
32. in 8051 is used as multiprocessor communication enable bit []
 A) SM0 B) SM1 C) SM2 D) T1
33. In mode 2 of 8051, ...bits are transmitted through TXD or received through RXD []
 A) 9 B) 10 C) 11 D) 12
34. The baud rate in mode 0 is fixed at the shift clock frequency of..... []
 A) System clock freq/8 B) system clock freq/12
 C) System clock freq/32 D) system clock freq/64
35. The processor 8051 can be revoked from the idle mode by applying asignal []
 A) Software interrupts B) hardware interrupt
 C) Hardware reset D) both b and c
36. is an assembler directive that puts a byte constant at the memory location specified []
 A) ORG B) DB C) DW D) DBIT
37. In 8051, The Read strobe signal is given by.. []
 A) PSEN B) IE C) EA D) ALE
38. D4 bit of TCON is: []
 A) TF1 B) TF0 C) TR0 D) TR1
39. Split timer mode is applicable only for timer... []
 A) 0 B) 1 C) 2 D) 3
40. 8051 microcontrollers when operated as counters can count pulses applied on the External pin.....in timer 0 []
 A) P3.1 B) P3.2 C) P3.3 D) P3.4
41.has the highest interrupt priority in 8051 []
 A) External 0 B) External 1 C) Timer 1 D) Timer 0
42. 8-bit UART with variable baud rate is achieved by serial mode... []
 A) 0 B) 1 C) 2 D) 3
43. 9-bit UART with FOSC/64 is achieved by serial mode... []
 A) 0 B) 1 C) 2 D) 3
44. When 8051 is reset, the stack pointer is by default set to... []
 A)00H B)02H C)05H D)07H

UNIT – IV PROGRAMMING OF 8051

1. A machine language instruction format consists of []
 A) Operand field B) Operation code field
 C) Operation code field & operand field D) none of the mentioned
2. The length of the one-byte instruction is []
 A) 2 bytes B) 1 byte C) 3 bytes D) 4 bytes
3. The disadvantage of machine level programming is []
 A) time consuming B) chances of error are more
 C) debugging is difficult D) all of the above
4. The coded object modules of the program to be assembled are present in []
 A) .ASM file B) .OBJ file C) .EXE file D) .OBJECT file

5. The interrupt for which the processor has the highest priority among all the external interrupts is []
 A) keyboard interrupt B) TRAP C) NMI D) INT
6. Once the processor responds to an INTR signal, the IF is automatically []
 A) set B) reset C) high D) low
7. Which stack is used in 8051 []
 A) LIFO B) FIFO C) LIFO D) FILO
8. For an 8-bit timer, 50 is loaded as preset input. After how many pulses all outputs will become 1? []
 A) 255 B) 256 C) 257 D) 206
9. Pre-scalar in a timer does the following []
 A) Selects input clock source B) multiplies input clock
 C) Divides input clock D) Presets input to the clock
10. Timer 1 runs & Timer 0 stops when []
 A) TCON .6=1 & TCON .4=0 B) TCON .4=0 & TCON .5=1
 C) TCON .6=0 & TCON .4=1 D) TCON .4=1 & TCON .5=0
11. How many Timers are available in 8051? []
 A) Two 16-bit timers B) Two 8-bit timers
 C) One 8-bit & One 16-bit timer D) None of the above
12. The number of general purpose ports available in 8051 during expanded mode are []
 A) 1 B) 2 C) 3 D) 4
13. Serial port of 8051 uses which of the following modes for programmable baud-rate and nine data bit transmission []
 A) mode 0 B) mode 1 C) mode 2 D) mode 3
14. Which of the following cannot be programmed in 8051? []
 A) Modes of operation B) start/stop C) preload D) pre-scalar
15. The RS0 & RS1 bits are []
 A) Not available in PSW B) Are bits of 3&4 of PSW
 C) Are bits of 4&5 of PSW D) In register bank itself
16. Which of the following is not a programmable feature of timer? []
 A) Modes of operation B) run timer C) preload input D) Overflow
17. Maximum amount of external memory which can be connected to 8051 is []
 A) 4kb B) 16kb C) 64kb D) 32kb
18. How much internal RAM is available in 8051? []
 A) 4kb B) 128bytes C) 8kb D) None of these
19. Which of the following is true for 8051? []
 A) 8BIT SP & 16BIT PC B) 8BIT PSW & 16BIT PC
 C) 16BIT PSW & 16BIT SP D) 16BIT SP & 16BIT PSW
20. What is the application of capture mode? []
 A) Compare 2 events B) Generate an output pulse
 C) Measure pulse width D) Real time clock
21. Bit 00H of bit addressable RAM corresponds to []
 A) Bit 0 of RAM address 00H B) Bit 0 of RAM address 10H
 C) Bit 0 of RAM address 20H D) Bit 0 of RAM address 30H
22. If IP register only has the default priorities, then which of the following has the highest priority? []
 A) INT0 B) INT1 C) Timer 0 Overflow D) Serial Port
23. Which bit of IP is to be set for making serial port interrupt as highest priority? []
 A) IP.1 B) IP.3 C) IP.4 D) IP.5
24. How many timers are available in 8051? []
 A) Two 16-bit timers B) Two 8-bit timers
 C) One 8-bit & one 16-bit timer D) One 16-bit timer
25. Which of the following is true for 8051? []
 A) Harvard architecture B) 16 bit address and Data bus
 C) 16 bit address and 8 bit data bus D) 4 ports

26. Which port is used for AD0- AD7 lines in expanded mode of Operations? []
 A) PO B) P1 C) P2 D) P3
27. The total amount of external code memory that can be interfaced to the 8051 is []
 A) 32K B) 256K C) 128K D) 64K
28. When the 8051 is reset and the EA line is LOW, the program counter points to the first program instruction in the []
 A) External Data Memory B) Internal Code Memory
 C) External Code Memory D) Internal Data Memory
29. What is the difference between the 8031 and the 8051? []
 A) The 8051 is ROM-less B) The 8051 has 64bytes more memory
 C) The 8031 has no interrupts D) The 8031 is ROM-less
30. Which of the following will add the accumulator and register 3? []
 A) ADD @R3, @A B) ADD @A, R3
 C) ADD A, R3 D) ADD R3, A
31. The 8-Bit address bus allows access to an address range of []
 A) 0 to FH B) 0000 to FFFFH
 C) 000 to FFFH D) 00 to FFH
32. Which of the following commands will move the value at port 3 to register 2? []
 A) MOV P2, R3 B) MOV R3, P2
 C) MOV 3P, R2 D) MOV R2, P3
33. Which instruction is used to select the first row first column of an LCD? []
 A) 0x08 B) 0x0c C) 0x80 D) 0xc0
34. In reading the columns of a matrix, if no key is pressed we should get all in binary notation []
 A) 0 B) 1 C) F D) 7
35. Which bit of the IE register is used to enable TxD/RxD interrupt? []
 A) IE.D5 B) IE.D2 C) IE.D3 D) IE.D4
36. Which pin of the LCD is used for adjusting its contrast? []
 A) pin no 1 B) pin no 2 C) pin no 3 D) pin no 4
37. How many rows and columns are present in a 16*2 alphanumeric LCD? []
 A) Rows=2, Columns=32 B) Rows=16, Columns=2
 C) Rows=16, Columns=16 D) Rows=2, Columns=16
38. Which command of an LCD is used to shift the entire display to the right? []
 A) 0x1C B) 0x18 C) 0x05 D) 0x07
39. What changes are to be made to send data to an LCD? []
 A) set the R/W bit B) set the E bit C) set the RS bit D) all of the mentioned
40. Which register is used to make the pulse a level or an edge triggered pulse? []
 A) TCON B) IE C) IPR D) SCON

UNIT – V INTERFACING OF 8051

1. How many interrupts are there in micro controller? []
 A) 2 B) 3 C) 4 D) 5
2. In 8051, the instruction “MOV IP,#18h” sets priority of interrupts as []
 A) RI+TI>TF1>INT0>TF0>INT1 B) TF1>RI+TI>INT0>TF0>INT1
 C) INT0>TF0>INT1>TF1>RI+TI D) INT0>RI+TI>TF1>TF0>INT1
3. The operations performed by data transfer instructions are on []
 A) bit data B) byte data C) 16-bit data D) all of the above
4. The logical instruction that affects the carry flag during its execution is []

27. All conditional jumps are []
 A) absolute jumps B) long jumps C) short jumps D) none of the above
28. In logical instructions, the immediate data can be an operand for []
 A) Increment operation B) decrement operation C) single operand D) none of the above
29. When we add two numbers the destination address must always be []
 A) Immediate data B) register C) accumulator D) memory
30. DA A command adds 6 to the nibble if []
 A) CY=AC=1 B) CY=1 or AC=1 C) no relation with CY or AC D) CY=1
31. In reading the columns of a matrix, if no key is pressed we should get all in binary notation []
 A) 0 B) 1 C) F D) 7
32. If we need to operate a key of a keyboard in an interrupt mode, then it will generate what kind of interrupt? []
 A) ES B) EX0/EX1 C) T0/T1 D) RESET
33. Key press detection and key identification are []
 A) Two different works B) the same process C) none of the above D) any of the above
34. In 8051 and LCD interface, which line will instruct the LCD that microcontroller sending data []
 A) DB0 B) RW C) EN D) RS
35. Interfacing LCD with 8051 _____ data lines are used along with the _____ signals []
 A) 6,RS,RW B) 5,RW,EN C) 8,RS,EN,RW D) 9,RS,EN,RW
36. 8051 series of microcontrollers are made by which of the following companies? []
 A) Atmel B) Philips C) Atmel & Philips D) None
37. AT89C2051 has RAM of: []
 A) 128 bytes B) 256 bytes C) 64 bytes D) 512 bytes
38. 8051 series has how many 16 bit registers? []
 A) 2 B) 3 C) 1 D) 0
39. When 8051 wakes up then 0x00 is loaded to which register? []
 A) DPTR B) SP C) PC D) PSW
40. When the microcontroller executes some arithmetic operations, then the flag bits of which register are affected? []
 A) PSW B) SP C) DPTR D) PC