PRACTICAL & ORAL EXAM

T.E. ETRX/ SEM V/ MCA/2017-18

1. Write a program for storing the current value of accumulator in location 23H and then store the value of input PORT0 into the accumulator.

2. Write a program to copy a data from location 20H to location 27H and copy the data from PORT0 to PORT1.

3. Write a program to fill address 30H to 3Fh with number starting from 0FH to 00H in decreasing order? (Hint: use indirect addressing, INC and DEC instructions)

4. Write a program to ADD numbers stored at memory location 30h, 31h and 32h. Store the result at 33h and 34h.

5. Write a program to Subtract numbers stored at memory location 30h, 31h and 32h. Store the result at 33h and 34h.

6.

org 0000H MOV R0,#00H sjmp 0084H org 0084H INC R0 ajmp 8000H org 8000H ljmp 0000H end	Address	Instruction	Comments

Adjust the address so that it compiles. Find the difference between this 3 instructions. (Comparison of instruction bytes and cycles)

7. Draw a flowchart and write a program Fill address from 0x30 to 0x3F with this sequence of number 1,2,3,6,10,15,21,28,…and so on(Hint: find the gap between the numbers)

8. Write a program to affect PORT P1 and address 020H without affecting the other bits.

Clear Bit 0 and Bit 4. Set Bit 1 and Bit 5. Toggle Bit 2 and Bit 6 using Bit and Byte Instruction.

9. Write a program to check whether Port1 pin 0 is High or Low and depending on that make Port2 pin 0 high or Low(Hint :Use JNB or JB) .

10. Using CJNE instruction write a program to find how many positive numbers and negative numbers are there in an array from location 030H to 03AH?(Hint : numbers greater than 7FH are negative).

11. Write a program to find the number of 1 in byte. Use RLC/RRC with JNC to write the program

12. Write a program using MOVX instruction to read values from an array of 10 bytes and increment the value in the array and store it back.

13. Write a program so that the LED on Pin P1.0 blinks continuously with ON=10ms and OFF=50ms .Set the clock frequency of Microcontroller to 12 MHz.

14. Write a program to generate the pattern given on PORT1 with delay of 100ms

PORT1							
7	6	5	4	3	2	1	0
OFF	OFF	OFF	OFF	OFF	OFF	OFF	**ON**
OFF	OFF	OFF	OFF	OFF	OFF	**ON**	OFF
OFF	OFF	OFF	OFF	OFF	**ON**	OFF	OFF
OFF	OFF	OFF	OFF	**ON**	OFF	OFF	OFF
OFF	OFF	OFF	**ON**	OFF	OFF	OFF	OFF
OFF	OFF	**ON**	OFF	OFF	OFF	OFF	OFF
OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF

15. Write a program so that when a momentary switch is pressed LED is ON when released LED is OFF.Led is connected on P1.0 and switch on P2.0.

16. Write a program where 2 momentary switches are connected to P2.0 and P2.1.On pressing button on P2.0 the led should be latched ON and on pressing button P2.1 the led should be latched OFF.The led is on P1.0

17. Write a program to display a binary counter on the LED.Switch 1 connected to P2.0 will increment the counter and Switch 2 connected to P2.1 will decrement the counter.Display the counter on PORT1.

18. Write a C program to display your name on LCD. (Use hardware kit)

19. Write a program to turn ON buzzer for 10ms and turn OFF for 30ms.

20. Write a program to transfer a block of 20 elements from memory location 15h onwards to 51h onwards.

21. Write a program to display today's date/ name with roll number on LCD.

22. Write a program to communicate 'VESIT' serially using baudrate 9600.

23. Write a program to generate delay for 1ms, 5ms and 30ms. Show calculations clearly.

24. Write a program to toggle alternate pins of PORT 1 continuously with a delay of 15ms.

25. Write a program to convert given decimal number (Roll No) into its equivalent ASCII.

26. Write a program to perform multiplication of two numbers stored in internal RAM and store the result in next memory locations.

27. Write a program to perform multiplication of two numbers stored in external memory and store the result in next memory locations.

28. Write a program to perform division of two numbers stored in internal RAM and store the result in next memory locations.

29. Write a program to perform division of two numbers stored in external memory and store the result in next memory locations.

30. Write a program to show selection of multiple register banks from internal RAM.

31. Write a program to arrange the given array in ascending order. (Array:- 12, 21, 13, 31, 14, 41, 15, 51, 16, 61)

32. Write a program to generate Triangular and Square waveforms by interfacing DAC 0808 with 8051 microcontroller.

33. Write a program to count occurrences of a byte in an array of 50 numbers.

34. Write a program to perform 16 bit addition with carry.

35. Write a program to find EVEN and ODD numbers in an array.

36. Write a program to perform inverse block transfer.

37. Write a program to find largest number in an array.

38. Write a program to convert given HEX number to its equivalent BCD.