

QUESTION BANK
EJ4K
MAA (314328)

MARKS (2)

1. Find out the number of address lines required to access 4 KB of RAM. (CO4)
2. -Draw interfacing diagram of 4x4 keyboard matrix with 8051 microcontroller. (CO5)
3. State the pins on ADC 0808/09 used for handshaking with the microcontroller 8051. (CO5)
4. State the function of following directives (1) DB (2) EQU. (CO3)
5. State the use of GATE bit in TMOD SFR format, in 8051 microcontroller. (CO3)

MARKS (4)

1. Draw the interfacing of stepper motor and write an ALP to rotate in anticlockwise direction. (CO5)
2. Describe power down mode and ideal mode of 8051 with circuit diagram. Which SFR is used to set these modes and draw the same(CO3)
3. Develop an ALP to generate square wave of 2 kHz on port pin P 2.1 generate delay using timer 0 in mode 1. Assume crystal frequency of 11.0592 MHz. (CO4)
4. State and explain the need of the following development tools microcontroller board: (i) (ii) Editor Assembler (iii) Compiler (iv) Linker(CO3)
5. List different timer modes of 8051 microcontroller and describe mode 2 with neat sketch. (CO3)
6. Explain the interfacing diagram of DAC to 8051. Write an ALP to generate triangular waveform using DAC. (CO5)
7. List software and hardware interrupts used in 8051 with their vector addresses and priorities. (CO3)
8. Develop an ALP to read temperature from LM 35 sensor. Draw the interfacing diagram with 8051. (CO5) Develop a program to toggle the LED's after every 500 m sec connected to P 1.0 and P 1.1 after receiving the external interrupt on INTO.(CO4)
9. Develop an ALP to transmit message "MSBTE" serially at baud rate 4800 8 bit data, 1 stop bit. Assume crystal frequency of 11.0592 MHz.(CO3)
10. Write an ALP for traffic light controller using microcontroller 8051. Use timers in the 8051 to obtain delay. (Consider suitable data) (CO5)
11. Draw format of IE register in 8051 microcontroller & write instructions to enable serial interrupt, timer 0 interrupt and external hardware interrupt 1 (EX1)((CO3)
12. Draw the format of TCON register of 8051 and describe the function of each bit of it. . (CO3)
13. Draw interfacing of 16 × 2 LCD with 8051 and state the function of EN and RS pin of LCD.(CO4)
14. Explain the modes of Timer operations in 8051 μc. (CO3)

15. Draw interfacing of seven segment display with 8051 μ c. Write an ALP to display count from 0 to 9.(CO4)
16. Draw interfacing of ADC with 8051 μ c.(CO4)
17. Draw and explain interfacing of 16 x 2 LCD display with 8051 μ c. (ii) Write ALP to display "WELCOME" on LCD display.(CO4)