

- Que.3.** Answer any two. [10]
- Write an assembly language program to toggle the bits of port 1 with a delay which depends on the value of number in r0. (5)
 - Write an assembly language program to divide the content of r0 by r1. Store the result in r2 (answer) and r3 (remainder). Then restore the original content of r0. (5)
 - Write an assembly language program to find no. of 0's and 1's from the given 8 bit data. (5)

SECTION: II

- Que.4.** [10]
- Discuss the difference between a microprocessor and a microcontroller with block diagram. (4)
 - Discuss the following with example. (5)
1). PROGRAM COUNTER 2). A & B REGISTER
 - ADD 85H & 70H find the content of AC, CY, and P? (1)

OR

- Que.4.** [10]
- What is execution time of a single cycle instruction for 6Mhz Crystal? (2)
 - Differentiate the stack and stack pointer with necessary figure and example. (4)
 - Discuss the internal RAM organization of 8051 microcontroller. (4)

- Que.5.** [10]
- Write Program to generate two square wave one of 5kHz at pin p2.3 and second of frequency 25khz at pin P3.1. Assume the XTAL=22Mhz. (5)
 - Explain the Enabling and disabling an interrupt with role of interrupt enable register? (4)
 - Write the functions of Port 0. (1)

OR

- Que.5.** [10]
- What is interrupt vector table? Write the interrupt vector table for 8051. (5)
 - Differentiate the interrupt & polling with example. (3)
 - What are the function of bits PSW.3 & PSW .4? (2)

- Que.6.** [10]
- Draw and explain the interfacing diagram of stepper motor with 8051 microcontroller and write the codes for the same. (5)
 - Discuss various addressing modes of 8051 microcontroller. (5)

END OF PAPER