Exam.Code:0934
Sub. Code: 6664

2053

B.E. (Electrical and Electronics Engineering)

Fourth Semester

PC-EE-404: Microprocessor and Microcontroller

Time allowed: 3 Hours Max. Marks: 50

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Part.*

x-x-x

1 (a) What do you understand by the term "Data Framing" with respect to computers ?

(b)How many memory locations can be addressed by a microprocessor with 14 address lines?

(c) For time delay ,using a single register method ,what is the maximum delay achieved if clock Frequency is 1MHz.

(d) How is Data Pointer different from Program Counter in 8051?

(e) What is the function of External Access pin in 8051?

(5X2)

PART A

2 (a) Discuss the various addressing Modes of 8085 giving examples

(b) A set of ten bytes is stored starting from memory location XX50H. WAP to check each byte and save the bytes that are higher than 60_{10} and lower Than 100_{10} in memory location starting from XX60H.

(4,6)

3 (a) A string of 16 data bytes is stored starting from memory location 3000H. Write an assembly language program to ignore all data in which the D7 and D0 bits are "1", and relocate the remaining bytes at address 3200H

(b) Describe the Interrupt system of 8085 ,the discussion should explain the process of Enabling ,disabling ,masking interrupts.

(6,4)

4 (a) Explain data transfer during execution of "CALL" instruction.

(b) WAP to generate a continuous square wave with a period of 400μs. Use bit D_0 To output the square wave. Use clk frequency= 2MHz

(4,6)

P.T.O.

PART B

5. (a) Give block diagram of Programmable Peripheral interface 8255

   (b) Discuss the control word for BSR and I/O Modes

(5,5)

6. (a) Discuss the Registers in 8051 Data Memory

   (b) Design a schematic for interfacing a 2K x 8 memory IC with 8085 Using a 74LS138 (3 to 8 decoder) ,thereby generating address range for the Memory IC 9800H to 9FFFH

(5,5)

7. Write short notes on any three of the following :

   (a) Resatart Instructions

   (b) SIM and RIM in 8085

   (c) CALL & RET vs PUSH & POP

   (d) Asynchronous vs Synchronous Communication

(4,4,3)

x-x-x