



Microprocessor & Microcontroller System (1040)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any two** from each questions.
5. Draw neat sketch wherever necessary.

1. a) Draw & Explain 8085 Architecture. **10**
b) Explain following Instructions. **10**
 - i) PUSH
 - ii) POP
 - iii) XCHG
 - iv) LHLD
 - v) LDI
- c) Write an ALP to exchange the no. present on m/m location 1050H & 2050H. **10**
2. a) Which addressing modes used in 8051? Explain with suitable example. **10**
b) Write a program to count no. of 'O' present in 55H. **10**
c) Write a program to add the no. present on RAM memory location 40 – 44H & store the result at R₅. Register. **10**

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| 3. | a) | i) | Draw & Explain TMOD Register in detail. | 6 |
| | | ii) | Explain How Baud rate can be doubled in 8051 microcontroller. | 4 |
| | b) | | Write a program to generate squarewave for 1.5KHz frequency on P2.5 using Autoreload mode, Assume crystal frequency 12MHz. | 10 |
| | c) | | Write a program to transfer letter 'A' serially at 4800 Baud rate continuously. | 10 |
| 4. | a) | | Draw & Explain interfacing of stepper motor with 8051. | 10 |
| | b) | | Draw & Explain Block diagram of 8255. Also explain control word of 8255 in BSR mode. | 10 |
| | c) | | Write a program to display letter, "INDIA" of LCD. | 10 |
| 5. | a) | | Draw & Explain Ckt configuration of 93CXX with 8051 microcontroller. | 10 |
| | b) | | Explain the transmission modes of mod bus protocol with suitable format. | 10 |
| | c) | | Explain how data transmission & reception take place using Rs 232. | 10 |
