

SE205 - Microprocessor and Microcontrollers

P. Pages : 2

Time : Three Hours



GUG/W/23/13915

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answers wherever necessary with the help of neat sketches.

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| 1. | <p>a) Explain the function of following register in 8085 UP.</p> <div style="display: flex; justify-content: space-between;"> i) Program counter ii) Stack pointer </div> <p>iii) Instruction decoder.</p> | 8 |
| | <p>b) Explain the following instructions of UP 8086.</p> <div style="display: flex; justify-content: space-between;"> i) ADD AL, F0H ii) XCHG BX, CX </div> <div style="display: flex; justify-content: space-between;"> iii) DAA iv) DIV </div> | 8 |

OR

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| 2. | a) | Draw and explain HW interrupt structure of UP 8085. | 8 |
| | b) | Show the interfacing of two ICs of 4Kx8 RAM & two ICs of 16Kx8 EPROM with 8086. Give complete memory map and also show generation of CS signals. | 8 |
| 3. | a) | Draw and explain block diagram of Intel 8255 PPI in detail. | 8 |
| | b) | Explain the IC 8254 CWR format and set up the 8254 as a square wave generator with 1 ms period if the input frequency to the 8254 is 1 MHz. | 8 |

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| 4. | <p>a) Interface 8251 USART with UP 8085 such that the port addresses start from 80H. Draw the complete interfacing diagram. 8</p> <p>b) Show the interface of 8-bit DAC with up 8086 and write a program to generate ramp wave at output of DAC. 8</p> | | | | |
| 5. | <p>a) Draw and explain flag register of Pentium. 8</p> <p>b) Explain the following pins of UP 80486. 8</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">i) BLAST</td> <td style="width: 50%;">ii) BREQ</td> </tr> <tr> <td>iii) KEN</td> <td>iv) PCHK</td> </tr> </table> | i) BLAST | ii) BREQ | iii) KEN | iv) PCHK |
| i) BLAST | ii) BREQ | | | | |
| iii) KEN | iv) PCHK | | | | |

OR

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| 6. | <p>a) Write short note on.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>i) Paging</p> <p>iii) Cache memory</p> </div> <div style="width: 45%;"> <p>ii) Segmentation</p> </div> </div> | 8 |
| | <p>b) Draw and explain the architecture of UP 80386.</p> | 8 |

