

BE Semester- 6 (Electrical Engineering) Question Bank

Microprocessor Interfacing & Applications

All questions carry equal marks (10 marks)

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| Q.1 | Discuss stack in brief. Explain the use of stack in subroutines. |
| Q.2 | Discuss stack related instructions. Write a program to exchange the contents of PSW and register pair B-C. |
| Q.3 | What is interrupt? How microprocessor responds when some interrupt occurs? Discuss various RST instructions. |
| Q.4 | Discuss vectored interrupt of microprocessor 8085 in detailed. |
| Q.5 | Discuss control word register of Programmable Timer/Counter 8253. |
| Q.6 | Discuss priority modes of interrupt controller 8259. |
| Q.7 | Discuss CALL and RET instructions with suitable example. |
| Q.8 | Discuss RIM and SIM instructions and their use with suitable example. |
| Q.9 | Discuss architecture of 8255 with necessary diagrams. |
| Q.10 | Write a program to set port A in mode 0 and port C in BSR mode. |
| Q.11 | Discuss the control word of 8255 in detailed. Also discuss the BSR mode. |
| Q.12 | Discuss 8155 with suitable block diagram and explain its control word format. |
| Q.13 | Discuss 8237/8257 DMA Controllers with suitable diagram. |
| Q.14 | Discuss use of microprocessor in data acquisition system. |
| Q.15 | Discuss R -2 R ladder network type DAC. |
| Q.16 | Discuss S/H LF 398. |
| Q.17 | Discuss Application of microprocessor in temperature control System. |
| Q.18 | Discuss architecture of 8155 with necessary diagrams. |
| Q.19 | Discuss architecture of 8253 with necessary diagrams. |
| Q.20 | Discuss architecture of 8259 with necessary diagrams. |
| Q.21 | Discuss architecture of 8237 with necessary diagrams. |
| Q.22 | Discuss mode-0 operation of 8255 and control signals required for this operation. |
| Q.23 | Discuss mode-1 operation of 8255 and control signals required for this operation. |
| Q.24 | Discuss mode-2 operation of 8255 and control signals required for this operation. |
| Q.25 | Discuss stack in brief. Explain LIFO principle of stack with appropriate example. |
| Q.26 | Write a program to store the content of PSW, register pairs B-C, D-E and H-L. Fetch the data back to the corresponding register pairs. |

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| Q.27 | What is interrupt? Distinguish hardware and software interrupts. |
| Q.28 | Discuss various RST instructions and their use with suitable example. |
| Q.29 | What are programmable peripheral interface devices? Why they required. Explain with suitable example. |
| Q.30 | Discuss various types of ADCS. |
| Q.31 | Discuss various types of DACs. |
| Q.32 | Discuss Application of microprocessor in electrical power measurement. |
| Q.33 | Discuss Application of microprocessor in electrical power factor measurement. |
| Q.34 | Discuss Application of microprocessor in temperature measurement. |
| Q.35 | Discuss Application of microprocessor in reactive power measurement. |
| Q.36 | Discuss operation of 8155 with necessary diagrams. |
| Q.37 | Draw timing and control diagram of IN 01H instruction. |
| Q.38 | Draw timing and control diagram of OUT 01H instruction. |
| Q.39 | Draw timing and control diagram of LXI H 4060H instruction. |
| Q.40 | Discuss memory interfacing of 8085 microprocessor. |