

Jan-2009

B.sc (IT) sem-I

Min Oct 08 238

Digital Computer  
fundamental.

Con. 237-09.

TT-1340

( 3 Hours )

[ Total Marks : 100

N.B. : (1) Question No. 1 is **compulsory**.  
(2) Attempt any **four** questions from Q. Nos. 2 to 7.

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|----|---|----|
| 1. | (a) Explain the hardware and programming model of 8085 microprocessor.                                      | 10 |
|    | (b) Explain RAID memory in detail.  | 10 |
| 2. | (a) What is Stack ? Explain PUSH and POP instructions in detail.  | 10 |
|    | (b) Explain programmed I/o module and Interrupt Driven I/o module.  | 10 |
| 3. | (a) What is Instruction Pipelining ? Explain six-stage Instruction Pipelining with suitable Timing diagram. | 10 |
|    | (b) With suitable data flow diagrams explain Fetch Cycle, Interrupt Cycle and Indirect Cycle.               | 10 |
| 4. | (a) Explain the Bus organization in case of 8085 microprocessor.  | 8  |
|    | (b) What is multiprogramming ? Define scheduling and explain its type.                                      | 10 |
|    | (c) Define microprocessor.  | 2  |
| 5. | (a) Explain with suitable diagram DMA module and its functions.   | 8  |
|    | (b) Explain the structure and function of Modern Day Computer System.                                       | 12 |
| 6. | (a) With suitable diagram explain Cache Memory and explain mapping techniques.                              | 10 |
|    | (b) Define Subroutine. Explain the differences between RET and CALL instructions.                           | 10 |
| 7. | (a) Explain the PCI BUS Arbitration in detail.  | 10 |
|    | (b) Define Operating System. Explain its functions in detail.   | 10 |

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