

( 3 Hours )

[ Total Marks : 100

**N.B. :** 1) Q. 1 is compulsory.2) Solve any four questions out of remaining.3) Draw neat labeled diagram wherever necessary.4) Assume suitable data if required.

1. (a) Explain in detail characteristics of RISC and CISC. 10  
(b) Explain with suitable example booth's Algorithm for signed multiplication. 10
2. (a) Explain Flynn's classification in detail 10  
(b) Define the term "soft wired" and "hardwired". Explain with example the soft wired. 10
3. (a) Explain with suitable example the difference between computer architecture and computer Organization. 10  
(b) Explain IEEE format for floating point number representation. 10
4. (a) State the function of following CPU registers. 10  
MAR, MDR, IR, PC, SP.  
(b) What is memory interleaving? Discuss various memory leaving techniques. 10
5. (a) What is pipelining? Explain with suitable example the difference between serial executions And pipelined instruction execution. 10  
(b) Explain SPARC processor. 10
6. (a) Explain with state diagram MESI (Mutual Exclusive Shared Invalid) protocol. 10  
(b) Explain and solve the following problem using by non-restoring division algorithm. Hence Divide 10/3. 10
7. (a) Explain the different RAID levels. 10  
(b) Write short notes on : -  
1) DMA  
2) Vonneuman model in detail. 10
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