

JUNE-2008

2008-HIMACHAL PRADESH UNIVERSITY

B.TECH IV SEMESTER DEGREE EXAMINATION

COMPUTER ARCHITECTURE

(COMPUTER SCIENCE & ENGINEERING, INFORMATION TECHNOLOGY)

PAPER CODE IT-4001

**TIME-3 HOUR
MARK-100**

NOTE: ANSWER ALL QUESTION

SECTION-A[10*8=80]

1. What is Amdhal's law? Discuss in detail.
2. (a) Illustrate the functioning of 'Instruction Execution Cycle'.
(b) What is specified by addressing modes? Explain immediate, relative and indexed mode with examples.
3. What do you mean by pipeline hazards? Discuss the different classes of hazards.
4. Write short note on
 - (i) MIPS R 4000 pipeline
 - (ii) ILP.
5. Define virtual memory. How is it implemented? Explain in detail.
6. Write short note on the following:
 - (i) RAID.
 - (ii) UNIX file system performance.
 - (iii) SASD vs DASD.
7. What do you mean by transmission media? Discuss various types of transmission media. Give their merits and demerits.
8. (a) What are the performance metrics for communication mechanism in multiprocessor?
(b) What are the advantages of different communication mechanisms?

SECTION-B[10*2=20]

9. Explain the following terms:
 - (i) Displacement addressing mode.
 - (ii) Locality of reference.
 - (iii) Switch topology
 - (iv) Magnetic disk.
 - (v) Data type for DLX
 - (vi) Hit Time
 - (vii) TCP/IP
 - (viii) Cache performance.
 - (ix) Advantages of MIMD machine.
 - (x) Cache hit and cache miss.