

Memory Systems Test

1. Give four factors that influence the selection of an appropriate memory technology. ----- [4]
2. Explain the 'designer's dilemma' for memory systems [3]
3. Explain, using a diagram, the memory hierarchy. ---- [8]
4. Explain the role of cache memory.----- [3]
5. How can cache memory exploit spatial locality? ----- [3]
6. How can cache memory exploit temporal locality? --- [2]
7. Explain, using a worked example, how a parity bit can be used to detect errors. You should state the types of error that your scheme is capable of detecting and correcting. [6]
8. Explain, using a worked example, how error correcting codes can use bit- and column-parity to detect and correct errors. You should state the types of error that your scheme is capable of detecting and correcting. - [8]

Answers: See lecture slides.