

Day & Date	Semester	Subject Name	Time	Code	Marks
Wednesday 04/04/2018	III (Repeater)	Computer Organization and Architecture	02.30 PM to 05.00 PM	3103	75

- Instructions:** I) Question no. 1 is compulsory.  
 II) Attempt any 4 questions from Q.2 to Q. 8  
 III) Draw diagrams wherever necessary.
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1. Write short notes on the following.
  - a. System Bus 7
  - b. Magnetic Tape 8
  
2.
  - a. Explain evolution of I/O Function. 7
  - b. What is the need of a replacement algorithm in cache design? Explain various techniques in brief. 8
  
3.
  - a. Draw and explain basic instruction cycle. 7
  - b. Explain the need of multiple bus hierarchies and discuss mezzanine architecture. 8
  
4.
  - a. Explain the memory hierarchy with a suitable diagram. 7
  - b. Define Interrupt. Explain design issues in interrupt driven I/O 8
  
5.
  - a. What is a mapping function? Explain Direct mapping. 7
  - b. Explain various data transfer types considered during bus design. 8
  
6.
  - a. How are errors detected in Hamming code using Venn diagram. 7
  - b. Explain following terms - SISD, SIMD, MISD, MIMD. 8
  
7.
  - a. Explain generic model of an I/O Module. 7
  - b. Discuss DMA function. 8
  
8.
  - a. Write a note on - Random Access Memory. 7
  - b. Differentiate between the following : RISC and CISC 8