

B.Tech III Year II Semester (R09) Supplementary Examinations December 2016

**COMPUTER ORGANIZATION**

(Common to EIE and E.Con.E)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Define the following:
  - (i) Internal bus.
  - (ii) Synchronous bus.
  - (iii) Backplane.
  - (iv) Asynchronous bus.(b) Explain about NaN and demoralized numbers in IEEE 754 standards.
- 2 (a) Briefly explain the stack organization in a computer.  
(b) Discuss in brief about three address, two address and one address instructions in a computer with examples.
- 3 (a) What are micro-subroutines? How do we reduce number of micro instructions?  
(b) Explain the operation of decoding of micro-operations with the help of diagram.
- 4 (a) Explain decimal arithmetic unit with the help of diagram.  
(b) Give means to identify whether or not an overflow has occurred in 2's complement addition or subtraction operations with an example. Assume 4 bit registers.
- 5 (a) What is cache memory? Explain its operation.  
(b) Brief out the hardware organization of associate memory.
- 6 (a) Explain about Input-output Interface.  
(b) Discuss about Serial Communication Protocols.
- 7 Draw the Flow chart for point addition and subtraction for pipeline operations. Explain with an example.
- 8 (a) Explain the functioning of hypercube network with an example. Show a neat sketch.  
(b) Explain the working of omega switching network. Show a neat sketch.

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