2nd Semester Regular/Back Examination – 2016
COMPUTER ORGANIZATION AND SYSTEM ARCHITECTURE
QUESTION CODE: W 349
BRANCH: MCA
Time: 3 Hours
Max marks: 70
Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1   Write brief notes on following terms: (2 x 10)
  a)   ARM
  b)   RISC
  c)   RAID
  d)   HPC
  e)   CISC
  f)   CLV
  g)   SIMD
  h)   Firmware
  i)   MMX
  j)   MIPS

Q2 a) With a suitable diagram explain the Von Neumann Architecture.   (5)
    b) With a suitable diagram explain PCI Bus Structure.   (5)

Q3 a) With a suitable diagram explain the data flow of fetch cycle.   (5)
    b) With a suitable diagram explain the data flow of Indirect cycle   (5)

Q4.   Discuss the various addressing modes available in a computer System (10)
        and their merit and demerits.

Q5 a) Discuss Flynn's Classification of Parallel Processing.   (5)
    b) With a suitable diagram explain how pipeline can improve performance (5)
        of a computer system.

Q6 a) Discuss the tradeoff between long vs short instruction formats.   (5)
    b) Compare between Hardwired and Micro programmed Control Design.   (5)

Q7 a) With a suitable example, explain 2's complement representation.   (5)
    b) Discuss briefly on Floating Point Number representation on a 32-bit (5)
        memory. The largest and smallest numbers that can be represented.

Q8   Discuss briefly on **any two**   (5 x 2)
  a)   Virtual Memory
  b)   Interrupt driven I/O
  c)   DMA
  d)   Associative Memory