Mid-West University

Examinations Management Office

Semester End Examinations 2081

Bachelor level/ B.E. Computer/ 5th Semester   Full Marks: 50

Time: 3 hours   Pass Marks: 25

Subject: Computer Organization and Architecture (CO454)

- *Attempt all the questions*
- *Figures in the margin indicate full marks.*
- *Assume suitable values, with a stipulation, if necessary.*
- *Candidates are required to answer the questions in their own words as far as possible.*

1. What are the future trends in computer? Are computer organization and architecture (1+2+2)
    same or different? Justify? Mention the features of SSI and MSI circuits.

2. What are instruction sets and instruction cycles? Explain the working of ALU with the (1+4)
    help of suitable block diagram

3. List-out the features of Power PC Processor. Multiply the two numbers **11** and **21** by (1+4)
    using **Booth's** Multiplication Algorithm.

4. What are micro-instruction sequencing and micro-instruction execution? Compare (1+4)
    Hardwired with Micro-programmed control unit.

5. What is micro-operation? Give some examples. Explain the control unit design of CPU (1+1+3)
    with the help of block diagram.

6. What is data communication processor? Draw and explain the I/O module in input/ (1+4)
    output organization

7. Draw the concept of memory hierarchy. Explain the basic operation of interrupt driven (2+3)
    I/O module with suitable block diagram.

8. What are the advantages of using cache memory? Explain how magnetic disk works? (2+3)

9. What is the relation between operating system and computer organization & (1+2+2)
    architecture? Explain the concept scheduling and of virtual partioning.

10. Short Notes On (*Any Two*)   (5)
    a) RAID
    b) Parallel processing & vector processing
    c) RISC pipelining & Arithmetic pipelining

The End