BIEL-025

B.Tech. – VIEP – ELECTRONICS AND COMMUNICATION ENGINEERING (BTECVI)

Term-End Examination

00494   **June, 2017**

BIEL-025 : ADVANCED MICROPROCESSOR ARCHITECTURE

Time : 3 hours   *Maximum Marks : 70*

Note : *Attempt any **seven** questions. All questions carry equal marks. Missing data, if any, may be suitably assumed.*

1. What is the function of a Control Unit ? Explain in brief about the concept of Hardwired and Micro-Programmed Control Unit Design.   *3+7*

2. What do you understand by the term "Bus Architecture" ? Differentiate between Uni-bus and Multi-bus architecture.   *3+7*

3. Explain the following terms :   *5+5*
   (a) Micro Operation
   (b) Instruction Cycle

4. Discuss the addressing schemes used for designing an instruction set. Give examples in each case. *5+5*

5. Differentiate between Centralized and Distributed shared memory architectures. *10*

6. List different types of models used in memory consistency. What are the various crosscutting issues in memory consistency ? *5+5*

7. Differentiate between the following : *10*

    (a)   CISC and RISC scalar processors

    (b)   Vector and Symbolic processors

8. What do you understand by the term "Instruction Level Parallelism" ? How do we overcome data hazards with dynamic scheduling ? Explain in brief. *4+6*

9. Explain the processes of the following : *5+5*

    (a)   Reducing Cache Misses

    (b)   Reducing Hit Time

10. Write short notes on any *two* of the following : *2×5*

    (a)   Main Memory

    (b)   VLIW Architecture

    (c)   Multivector and SIMD Computers

    (d)   Pipelining