

**B.Tech. – VIEP – COMPUTER SCIENCE AND  
ENGINEERING (BTCSEVI)**

**00675 Term-End Examination**

**June, 2019**

**BICS-022 : COMPUTER ARCHITECTURE**

*Time : 3 hours*

*Maximum Marks : 70*

---

**Note :** Attempt any **seven** questions. All questions carry equal marks.

---

---

1. Explain the following terms in the context of computer architecture : 5×2=10
  - (a) Memory address
  - (b) Cache memory
  - (c) Polish notation
  - (d) DRAM
  - (e) MIPS
  
2. (a) What is associative memory ? Explain its advantages. 5  
(b) Explain cache direct mapping with the help of an example. 5
  
3. What is shared memory multiprocessor ? Explain symmetric and asymmetric multiprocessor system in context of memory sharing. 10

4. Discuss the problem of Asynchrony for massively parallel processors. Also explain two possible solutions to solve these problems. 10
  5. (a) Explain low level and high level memory interleaving. 5
    - (b) Briefly explain software pipelining based VLIW architecture. 5
  6. What is thread level parallelism ? Explain with the help of an example. 10
  7. Compare and contrast between Flynn's classification and Structural classification. 10
  8. Briefly explain P6 micro-architecture, with the help of an example. 10
  9. (a) What is vector multiprocessor ? Explain with the help of a diagram. 5
    - (b) Design a flow chart showing the instruction cycle and interrupt cycle for a basic computer operation. 5
  10. Explain any *two* of the following : 2×5=10
    - (a) Hardware support for more parallelism at compile time
    - (b) Virtual memory
    - (c) Cache coherence problem in multiprocessing system
-