

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

**Term-End Examination**

00555

**December, 2014**

**BICS-022 : COMPUTER ARCHITECTURE**

*Time : 3 hours*

*Maximum Marks : 70*

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

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1. (a) Discuss the significance of Amdahl's law for a multiprocessor system. 5
- (b) Explain the various tools employed in Performance Analysis. 5
2. (a) Describe the Pipeline Processing Architecture. 5
- (b) List the various memory issues in multicore processor based system. 5
3. Compare and contrast between Flynn's classification and Structural classification. 10
4. Show how a compiler would schedule the sequence of any operations for execution on VLIW processor with three execution units. 10
5. (a) What is hit ratio ? Discuss any method to reduce cache misses. 5
- (b) Describe the Static Scheduling with an example. 5

6. What are the problems faced by super scalar architecture ? How are these problems removed in VLIW architecture ? 10
7. Explain a distributed memory multicomputer system with the help of an appropriate diagram. 10
8. (a) Describe the general features of RISC and CISC Instruction set. 5
- (b) Why do the majority of systems use virtual and physical page frames of same size ? Explain. 5
9. Show with timing diagram, instances of synchronous bus output to a slave from bus master. 10
10. Write short notes on any *two* of the following : 2×5=10
- (a) Pipeline Hazards
- (b) Virtual Memory
- (c) COMA Model
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