

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

Term-End Examination

June, 2017

00754

**BICS-025 : ADVANCED COMPUTER
ARCHITECTURE**

Time : 3 hours

Maximum Marks : 70

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

1. What are instruction streams and data streams ?
What are the classifications of data streams ? 10
2. Explain various types of interconnection
networks. 10
3. Draw the different dataflow diagrams of parallel
processors. Explain them. 10
4. (a) Explain bus arbitration methods briefly.
(b) What are interrupts ? Discuss their types
and uses. 5+5=10

5. (a) What is virtual memory ? State its mapping methods.
- (b) Explain the use of I/O interrupts for more efficient use of the CPU. 5+5=10
6. What is the purpose of pipelines ? Briefly describe instruction pre-fetching and branch handling in pipelines. 10
7. Discuss array computers and multiprocessor systems with their areas of application. 10
8. Explain SIMD matrix multiplication with the help of a suitable example. 10
9. Explain arithmetic pipelines with the help of a suitable example. 10
10. What is a parity bit ? How is it used for detecting errors ? Explain both, for even and odd parity bits. 10
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