

Roll No

CS - 605 (GS)**B.E. VI Semester**

Examination, December 2017

Grading System (GS)**Advance Computer Architecture***Time : Three Hours**Maximum Marks : 70*

- Note:* i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) State the CPU performance equation and discuss the factor that affect performance. 7
b) Explain Flynn classification of computer with the help of neat diagrams. 7
2. a) Explain data path and its control in detail. 7
b) What is Hazard? Explain its types with suitable example. 7
3. a) Explain the following : 7
i) Crossbar switch
ii) Multiport memory
b) Differentiate between CISC scalar processors and RISC scalar processors. 7
4. a) Discuss in detail about the performance issues in symmetric and distributed shared memory architectures. 7

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- b) What are the different way for branch prediction? Discuss how pipeline performance issues can be reduced by branch prediction. 7
5. a) Briefly explain how to overcome data hazards with dynamic scheduling using Tomasulo's approach. 7
b) Explain the design of super pipeline processor with diagram. 7
6. a) How is multi threading used to exploit threat level parallelism within a processor? Explain with example. 7
b) Differentiate between Distributed Memory Model and Shared Memory Model. 7
7. a) Describe the language features for parallelism. 7
b) Explain shared variable model and message passing model in detail. 7
8. Write short note : (Any four) 14
a) Functional and Logic model
b) Multiple context processors
c) Deadlock
d) Cache coherence
e) Memory Interleaving

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