

B.TECH SEM – VI (2007 COURSE) (COMPUTER ENGG.) :

WINTER - 2017

SUBJECT : ADVANCED COMPUTER ARCHITECTURE

Day : **Monday**
Date : **20/11/2017**

W-2017-2504

Time : **10.00 AM TO 01.00 PM**
Max. Marks : **80**

N.B.:

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of the remaining attempt **ANY TWO** questions from each section.
 - 2) Answers to both the sections should be written in the **SEPARATE** answer books.
 - 3) Draw neat and labeled diagram **WHEREVER** necessary.
 - 4) Figures to the right indicate **FULL** marks.
 - 5) Assume suitable data if necessary.
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SECTION – I

- Q.1** a) Draw and explain the classical memory hierarchy. [05]
b) Explain different memory contention techniques. [05]
c) What is Hazards? Explain hazard detention and resolution. [04]
- Q.2** a) Explain how parallelism is achieved in uniprocessor system. [07]
b) State and prove Amdahl's law for system improvement. [06]
- Q.3** a) What are the issues towards cluster computing? [07]
b) Explain in detail use of shared memory in superscalar architecture. [06]
- Q.4** a) Draw and explain VLIW processor. [06]
b) Explain in detail Arithmetic pipeline. [07]

SECTION – II

- Q.5** a) Explain classification of parallel processors in detail. [05]
b) Describe inter PE communication network in multiprocessor system. [05]
c) Explain Inter process communication mechanism. [04]
- Q.6** a) Write difference between RISC and CISC. [07]
b) Draw and explain Ultra SPARC. [06]
- Q.7** a) Write difference between loosely coupled and tightly coupled multiprocessor system with diagram. [07]
b) Explain multiport memory model in detail. [06]
- Q.8** a) Write notes on multiprocessor operating system. [07]
b) What is code optimization? Explain the different approaches for optimization. [06]

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