

R09**Code: 9A05704**

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December 2015

ADVANCED COMPUTER ARCHITECTURE

(Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain all basic conditions of parallelism.
(b) State and discuss about system interconnect architectures.
- 2 (a) Explain the process of scalability with the help of performance measures.
(b) Discuss about vector processor capabilities over superscalar processor.
- 3 (a) Describe in detail about linear pipe lining processor functionalities.
(b) State about instruction pipeline design process with an example.
- 4 (a) Explain the reasons why cache coherence is an accepted requirement in small scale multiprocessors.
(b) What is message passing? Discuss about possible message passing techniques.
- 5 Explain the vector processing principles in detail.
- 6 (a) Write about latency reduction mechanism.
(b) Describe about multithreaded architecture.
- 7 Explain in detail about how to achieve thread level parallelism and operation forwarding.
- 8 Write short notes on the following:
 - (a) Forms of parallelism.
 - (b) Trends in parallelism.
 - (c) Reorder buffer.
