Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech (IT) (Sem.–5)

COMPUTER APPLICATION PARALLEL ARCHITECTURE AND COMPUTING

Subject Code : IT-309

Paper ID : [A0518]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

a) Differentiate between MIPS rate and Throughput rate.

b) What is harmonic mean speedup?

c) What are linear pipeline processes?

d) What is data dependence?

e) Define bisection Width.

f) "*PRAN is a reference model*". Comment.

g) What is parallel merge?

h) Define control Dependence.

i) Define clock skew.

j) Define node duplication.

SECTION-B

Q2. Explain PRAM model in detail.

Q3. Discuss multi-vector and SIMD Computers.

Q4. Explain Hndler's classification.

Q5. How balancing is done in multiprocessor system?

Q6. Write a short note on shared variable parallel programming model.

SECTION-C

Q7. What are nonlinear pipeline processors? Explain reservation and latency analysis.

Q8. Explain Dynamic connection networks in detail.

Q9. Discuss various algorithms available for SIMD and multiprocessor systems.