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Total No. of Questions : 09] [Total No. of Pages :02

Paper ID [IT309]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem. - 5th)

PARALLEL ARCHITECTURE & COMPUTING (IT - 309)

Time : 03 Hours **Maximum Marks : 60**

Instruction to Candidates:

1) Section - A is **Compulsory**.
2) Attempt any **Four** questions from Section - B.
3) Attempt any **Two** questions from Section - C.

Section - A

Q1) *(10 × 2 = 20)*

a) What is circuit switching?

b) Explain threads.

c) What are the various types of parallelism?

d) What do you mean by replication?

e) What are systolic arrays?

f) What is the need of data dependency graph?

g) Explain the terms control flow and data flow.

h) What are dynamic connection networks?

i) What do you mean by concurrent programming languages?

j) What do you mean by cache coherence?

Section - B

(4 × 5 = 20)

Q2) Write about the evolution of the computer architecture.

Q3) Explain the following:
(a) Flynn's classification.
(b) Amdahl's Law.

Q4) Explain cost optimal algorithm.

Q5) Compare the relative powers of the various PRAM models.

Q6) How is scheduling done in multi - processor systems.

Section - C

(2 × 10 = 20)

Q7) Which are the various interconnection networks? Compare their performance.

Q8) Explain the relationship between languages and parallel architecture.

Q9) Explain in detail the differences between Array Processors and Multi Processor Systems.

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