PC-11313/NJ

D-39/2111
PARALLEL AND DISTRIBUTED SYSTEMS–211

(Semester–V)

Time : Three Hours]   [Maximum Marks : 50

Note : Attempt *three* questions each from Section A and B. Section C will be compulsory.

SECTION–A

I.   Explain the various issues in parallel computing along with applications.

II.   Explain the Flynn's classification of computer architectures with block diagrams.

III. Differentiate static and dynamic interconnections of parallel computing.

IV.   Compare and contrast shared and distributed memory programming approaches.

V.   What do you understand by systolic array and vector processors? How these are different than SIMD and pipelined processors?   (3×5=15)

SECTION–B

VI. What are the features of parallel object-oriented programming?

VII. Describe the issues involved in achieving data and control parallelism in parallel computing with suitable examples.

VIII. What is PRAM model? Which PRAM model can be used to execute any other PRAM algorithm and how?

IX. Explain various performance metrics of parallel processors in detail.

X. Describe various types of distributed memory networks used in parallel processors. Also state the limitations.

(3×5=15)

SECTION–C

XI. Attempt all the questions :

(a) What is Distributed Computing System?

(b) What is Data Flow Programming?

(c) Define Control Parallelism.

(d) Define VLIW.

(e) What is Parallel Computing?

(f) What is Multithreading?

(g) What is Non-Uniform Memory Access?

(h) What is the need of Parallel computing?

(i) What is Multicomputer?

(j) What is Uniprocessor?   (10×2=20)

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