

Parallel Architecture and Computing
(IT-309, Dec-07)

Section-A

- 1). a). Define pipelining?
- b). What are major components of array processors?
- c). What is difference between available and utilized parallelism?
- d). Define Brent's theorem.
- e). What are control hazards?
- f). Differentiate shared memory and distributed memory MIMD architecture?
- g). What are different ways of exploiting parallelism in parallel computer architecture?
- h). Multiprocessor systems are SIMD systems. State True or False with reason.
- i). What are non uniform access multiprocessors?
- j). What do you mean by Parallel merge?

Section-B

- 2). How instruction pipelining is implemented in parallel processing?
- 3). Explain load balancing in multiprocessor systems.
- 4). What do you mean by data hazards and how they are removed?
- 5). What are the relative powers of the various PRAM models?
- 6). What are different components of MIMD architecture? How it is different from SIMD architecture?

Section-C

- 7). What are different parallel algorithms for SIMD architectures? Explain.
- 8). Explain how memory is accessed in multiprocessors?
- 9). What are different parameters on basis of which various networks of Array processors are compared?