BE Semester- VI (Computer Engineering) Question Bank

(Parallel Computing)

All questions carry equal marks (10 marks)

Q.1	Define Parallel Processing .Explain Pipelined processor in detail.
Q.2	Explain Various parallel programming models.
Q.3	Explain advantages and disadvantages of parallel processing.
Q.4	Discuss classification of parallel computers.
Q.5	What is Granularity? Explain effect of granularity on parallel processing.
Q.6	Compare explicit and implicit parallelism. Explain methods of explicit parallelism.
Q.7	What is speedup? Differentiate Ideal speedup v/s True speedup.
Q.8	Explain pthread_t, Pthread_create, pthread_kill, pthread_exit APIs of POSIX thread library.
Q.9	What is race condition? Explain race condition with example.
Q.10	Write a program to solve producer-consumer problem using threads.
Q.11	Draw and explain architecture of PVM.
Q.12	Write a pthread program to create 10 threads and show message from each thread.
Q.13	What is thread? How it is different than process? Explain thread attributes.
Q.14	Explain Condition variable using pthread example.
Q.15	Explain expression splitting with example. Also explain use of it in parallel Computing.
Q.16	Give comparison of Temporal and Data parallel processing.
Q.17	Classify parallel computers based on Flynn's Taxonomy
Q.18	Explain Java RMI with Example.
Q.19	Write a short note on : 1) Contention 2) Thread V/s Process
Q.20	Write a short note on : 1) Block Scheduling 2) Mutual Exclusion
Q.21	Write about the support from os in multiprocessing. Also list and explain types of Operating system for parallel machine.
Q.22	compare shared memory **v/s** Dynamic memory programming model
Q.23	Compare Dynamic memory model **v/s** Message passing model.
Q.24	Explain forward dependency .Also explain how to overcome it.
Q.25	Explain Barriers in parallel computing.
Q.26	Explain semaphores and events.
Q.27	Differentiate ideal speedup v/s true speedup.
Q.28	Explain Parallel Sorting Algorithms
Q.29	Discuss Analysis Of Parallel Algorithms
Q.30	Explain Parallel Reduction technique.

Q.31	Explain different Attributes Of Threads.
Q.32	Explain mutex and condition variable in threads.
Q.33	Explain about DCE Directory service and DCE Time service.
Q.34	Explain about RPC in detail and also explain normal procedure call v/s remote Procedure call.
Q.35	Explain Parallel algorithm for bubble sort.
Q.36	Discuss General Model Of Shared Memory Programming
Q.37	Define Parallel Processing. Enlist various types of parallelism and explain any one in detail also compare the types of parallelism.
Q.38	Explain JAVA threads with Example
Q.39	Explain basic parallel programming techniques.
Q.40	Explain loop splitting with example.