B.E. Seventh Semester (Computer Science & Engineering) (C.B.S.) -
Elective - I : Parallel & Network Algorithm

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Notes : 1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) How complexing is computed in parallel computing. **7**

b) Define parallel processing. State law of measurement of performance of parallel processing. **7**

OR

2. a) What are network topologies. **7**

b) What are different modes of parallel computing. **7**

3. a) Why it is necessary to find data dependency in converting sequential program to parallel one. What are different types of data dependencies? **7**

b) Explain loop independent dependency with example. **6**

OR

4. a) What is meant by tiling transformation? Discuss the situation where tiling transformation in used. **7**

b) Explain loop carried dependence with example. **6**

5. a) Explain merge sont algorithm in parallel processing. What are limitations of implementing merge sont using parallel processing? **9**

b) Write any one sorting program using parallel programming. **4**

OR

6. a) Explain in detail hyper quick sont in view of parallel processing. **13**

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7.	a)	Explain Gauss method's steps for parallel program.	**7**
	b)	Write short note on Fourier transform.	**6**

OR

8.	a)	Explain in detail parallel solutions to a linear equation with suitable example.	**13**
9.	a)	Design a algorithm for shortest path for parallel processing.	**13**

OR

10.	Design Dijkestra algorithm for parallel processing.	**13**
11.	Explain with suitable example Depth first search algorithm in parallel processing environment.	**14**

OR

12.	Define a connected components of an undirected graph. Explain the Hirschberg's connected component algorithm with suitable example.	**14**

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