

**M. SC. (COMPUTER SCIENCE) SEM – I (CHOICE BASED
CREDIT & GRADE SYSTEM) : WINTER - 2017**

SUBJECT : ELECTIVE – I : a) PARALLEL PROCESSING

Day : Tuesday
Date : 31/10/2017

Time : 03.00 PM TO 06.00 PM
Max. Marks : 60

W-2017-0819

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

Q.1 Explain Parallel Algorithm designing? Also explain principles of parallel algorithm designing. **[15]**

OR

What is parallel processing? Explain features of parallel processing. Also explain applications of parallel processing.

Q.2 A) Answer **ANY ONE** of the following: **[08]**

- i) Describe Merge sort algorithm.
- ii) Explain Matrix transposition algorithm.

B) Answer **ANY ONE** of the following: **[07]**

- i) Explain vector reduction technique.
- ii) Explain the features of MPI.

Q.3 Answer **ANY THREE** of the following: **[15]**

- a) How to analyze scalability of parallel algorithms?
- b) Explain Data Parallelism.
- c) Describe the limitations of parallel processing.
- d) Explain the importance of parallel programming model.
- e) Explain the features of distributed computing.

Q.4 Write short notes on **ANY THREE** of the following: **[15]**

- a) Modularity and parallel computing
- b) Communication cost model
- c) Agglomeration
- d) Random numbers
- e) Trends in parallel processing

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