

**MCA (Revised)**  
**Term-End Examination**  
**December, 2017**

03410

**MCSE-011 : PARALLEL COMPUTING**

*Time : 3 hours*

*Maximum Marks : 100*

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**Note :** *Question no. 1 is compulsory. Attempt any three questions from the rest.*

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1. (a) Classify the pipeline processors. 10
- (b) Discuss cube and Hyper-cube interconnection networks with their node addresses. 10
- (c) Discuss the augmenting features of High Performance Fortran (HPF). 10
- (d) Explain Gustafson's Law in detail. 10
2. (a) Discuss the various kinds of metrics involved for analysing the performance of parallel algorithms for a parallel computer. 10
- (b) Why are performance metrics not able to achieve a linear curve in parallel computers ? Discuss the well-known services of overheads in a parallel computer. 10

3. (a) List and explain the 'ten' library routines/functions in PVM programming. 10
- (b) With an example, explain combinational circuit method for sorting. 10
4. (a) Discuss the various parameters for analysing parallel algorithms. 10
- (b) Explain superscalar processors in detail. 10
5. (a) Discuss and explain the organisation of Clos network. 10
- (b) Classify pipeline processors. Explain each classification in detail with an example. 10
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