Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **17CS3054** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PARALLEL COMPUTING** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Discuss the scope of parallel computing. | CO1 | 5 |
| b. | Evaluate the Communication Costs in Parallel Machines. | CO2 | 15 |
| (OR) | | | | |
| 2. |  | Elaborate the physical organization of parallel platforms. | CO3 | 20 |
|  |  |  |  |  |
| 3. |  | Examine any three Decomposition Techniques with examples. | CO3 | 20 |
| (OR) | | | | |
| 4. | a. | Compose the details of parallel algorithm models. | CO1 | 10 |
| b. | Explain any two static mapping schemes for load balancing. | CO3 | 10 |
|  |  |  |  |  |
| 5. |  | Elaborate the implementation of Matrix-Vector Multiplication algorithm with examples. | CO3 | 20 |
| (OR) | | | | |
| 6. | a. | Explain the principles of message passing programming. | CO5 | 5 |
| b. | Discuss the send and receive operations of message passing paradigm. | CO5 | 15 |
|  |  |  |  |  |
| 7. | a. | Write notes on thread cancellation. | CO5 | 5 |
| b. | Discuss the basics of thread. | CO5 | 5 |
| c. | Discuss the tips for designing asynchronous programs. | CO5 | 10 |
| (OR) | | | | |
| 8. |  | Elaborate the synchronization primitives in Pthreads. | CO5 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Explain the algorithms to solve the all-pairs shortest paths problems. | CO6 | 10 |
| b. | What is Sparse graph? Explain. | CO4 | 10 |