# **Department of Computer Science & Engineering**

**QUESTION BANK FOR VII SEM (CSE) (Autonomous Syllabus)**

**Subject Code: CSL74 TERM: SEP 2020 – FEB 2021 I.A. Marks: 50**

**Subject Name: High Performance Computing Lab Exam Hours: 03**

**Credits: 0:0:1 Exam Marks: 50**

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|  | 1. **Write an OpenMP program to perform addition of two arrays A & B store the result in the array C (Using Scheduling concept)** 2. **Write a CUDA program to print the message “Hello World” and demonstrate blocks by varying NUM\_BLOCKS to different sizes.** |
|  | 1. **Write an OpenMP program which performs C=A+B & D=A-B in separate blocks/sections where A,B,C & D are arrays.** 2. **Write a MPI program to send the message from a process whose rank=3 to all other remaining processes.** |
|  | 1. **Write an OpenMP program to add all the elements of two arrays A & B each of size 1000 and store their sum in a variable using reduction clause.** 2. **Write a CUDA program to multiply two matrices.** |
|  | 1. **Write an OpenMP program to multiply two matrices A & B and find the resultant matrix C** 2. **Write a MPI program to send the message from a process whose rank=3 to all other remaining processes.** |
|  | 1. **Write an OpenMP program to find the number of processes, number of threads, etc (the environment information).** 2. **Write a MPI program scatter the information to different processes (Consider at least Six Processes).** |
|  | 1. **Write an OpenMP program to find the largest element in an array using critical section.** 2. **Write a CUDA program for adding two vectors.** |
|  | 1. **Write an OpenMP program to show how thread private clause works.** 2. **Write a MPI program to find sum of 'n' integers on 'p' processors using point-to-point communication libraries call** |
|  | 1. **Write an OpenMP program to show how first private clause works.(Factorial program)** 2. **Write an MPI program where the master processor broadcasts a message “HELLO MSRIT” to the remaining processors using broadcast system call.** |
|  | 1. **Write an OpenMP program to multiply two matrices A & B and find the resultant matrix C**   **b. Write a CUDA program to print the message “Hello World” and demonstrate threads by varying BLOCK\_WIDTH to different sizes.** |

**Marks Distribution:**

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| **Conduction and Result** | **Write-Up** | **Execution** | **Viva** | **Change of Program** | **Total** |
| **Part – a** | **4** | **17** | **7** | **-10 Marks** | **50 Marks** |
| **Part – b** | **4** | **18** |