



İzmir Kâtip Çelebi University
Department of Engineering Sciences
IKC-MH.57
Introduction to High Performance and Parallel
Computing
Take-home Final Examination
January 19, 2024 14:00 – January 24, 2024 23:59
Good Luck!

NAME-SURNAME:

SIGNATURE:

ID:

DEPARTMENT:

DURATION: Due to January 24, 2024

- ◇ Answer all the questions
- ◇ Prepare your report/code(s).
- ◇ Copy your files into a directory named as your ID.
- ◇ Upload a single file by compressing this directory to UBYS.

Question	Grade	Out of
1		10
2		30
3		30
4		30
TOTAL		

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1. **(10 Pts)** Write a C program calculates the matrix-vector product sequentially.
2. **(30 Pts)** Design a parallel version of the same program using MPI calls.
3. **(30 Pts)** Design a parallel version of the same program using OpenMP pragmas.
4. **(30 Pts)** Analyze your both parallel programs in the aspects of speed-up and efficiency.