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|  | **NATIONAL INSTITUTE OF PHYSICS** College of Science  University of the Philippines  Diliman, Quezon City 1101 Metro-Manila  Telephone No. 981-8500 Locals 3701/3704 |  |

December 12, 2024

Dr. Wilson O. Garcia

Director

National Institute of Physics

C.S., U.P. Diliman, Quezon City

Dear Dr. Garcia:

Below is the official action of the panel members in the undergraduate thesis defense of Mr. Clarence Ioakim T. Sy. The defense of the thesis entitled **"** **CLASSROOM LEARNING DYNAMICS USING A CELLULAR AUTOMATA SPATIOTEMPORAL MODEL COMPARING PEER INSTRUCTION AND TRADITIONAL INSTRUCTION** " was held in NIP R211 on Thursday, 12 December 2024, 10:30 A.M.

Rating

Panel Members PASSED FAILED

Andrei Espencer M. Ordonio, B.Sc. \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Instructor of Physics

National Institute of Physics

C.S., U.P. Diliman, Quezon City

Ranzivelle Marianne L. Roxas-Villanueva, Ph.D. \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Professor of Physics

Institute of Physics

C.A.S., U.P. Los Baños, Los Baños

Johnrob Y. Bantang, Ph.D. (Adviser) \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

Associate Professor of Physics

National Institute of Physics

C.S., U.P. Diliman, Quezon City

The rating is therefore \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Sincerely yours,

CRISTINE DLR. VILLAGONZALO, Dr.rer.nat.

Deputy Director for Academic Affairs, NIP