



UNIVERSITY OF RUHUNA
FACULTY OF FISHERIES AND MARINE SCIENCES &
TECHNOLOGY

Academic Year 2023/2024

**Bachelor of Science Honours in Fisheries and Marine Sciences Degree/ Bachelor of
Science Honours in Marine and Freshwater Sciences Degree**

Level IV Semester I Examinations – April / May 2025

OCG 4162: Advanced Physical Oceanography

Time: 02 Hours

Section II

Answer only two (02) questions.

Time: 01 Hour / 50 Marks

- 1) Write short notes on the following.
 - a) Indo Pacific Warm Pool (IPWP) **(8 marks)**
 - b) Thermodynamic air-sea (TAS) feedback **(7 marks)**
 - c) Radiative heat flux **(10 marks)**

- 2) Upper ocean mixing processes are mainly driven by wind, buoyancy and shear. Discuss the mechanisms and explain their importance in regulating ocean dynamics and climate variability. **(25 marks)**

- 3) Discuss the importance of understanding the tropical mean state in the perspective of tropical air-sea coupled phenomena. **(25 marks)**

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