UNIVERSITY OF RUHUNA

FACULTY OF FISHERIES AND MARINE SCIENCES & TECHNOLOGY

Academic Year 2022/2023

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

Level III Semester I Examinations – June / July 2024

OCG 3142: Remote Sensing and GNSS **Time: 1 ½ hours**

Answer only three (03) questions

1.

i. Briefly describe the advantage of Remote Sensing in environmental monitoring over conventional in-situ sampling. (25 Marks)

ii. Compare and contrast the function of Cross-Track Scanners and Push-Broom Scanners. (25 Marks)

iii. By giving suitable examples, discuss the importance of spectral resolution in Remote Sensing. (50 Marks)

2.

i. Briefly describe the advantages and disadvantages of Aerial Photography. (25 Marks)

ii. Discuss in detail the importance of Aerial Photography over Satellite imagery in monitoring the coastal ecosystem. (75 Marks)

3.

i. Discuss the differences between Active and Passive Satellite Sensors. (25 Marks)

ii. Briefly explain the importance of spectral signatures in remote sensing. (25 Marks)

iii. Discuss the importance of Synthetic Aperture Radar data in Oil spill monitoring. (50 Marks)

4.

i. What are the four criteria used in evaluating the performance of a GNSS? (10 Marks)

ii. What are the factors affecting the accuracy of GNSS? (10 Marks)

iii. Briefly describe the three elements of GNSS. (30 Marks)

iv. Briefly describe how the tropospheric delay is used in Atmospheric Sensing in GNSS. (50 Marks)

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