University of Ruhuna - Faculty of Technology
Bachelor of Biosystems Technology Degree
Level 4 (Semester II) Examination
November/December 2023

Course Unit: BSTE 4242 – Weather Forecasting Technology (Theory)
Time Allowed: 1 hour and 30 minutes

Index No: ....

<u>INSTRUCTIONS:</u> Number of pages: four (4)

Part I - Answer all questions – 50 minutes.

Part II - Answer two (2) questions only – 40 minutes

Part I-Answer ALL Questions

1.

   a. Briefly explain the terms of weather analysis given below;   (15 marks)

i. Nowcasting	
ii. Forecasting	
iii. Warnings	

   b. List the seven (7) major steps of weather forecasting.   (10 marks)

1

2.

a. Briefly explain the following terms. (9 marks)

i. Air mass	
ii. Front	

Name four (4) types of fronts. (8 marks)

b. List four (4) weather disturbances (8 marks)

3.

a. What is a cloud? (4 marks)

b. Mention three (3) importance of clouds. (9 marks)

c. State major features of the following cloud types. (12 marks)

i	Cumulonimbus	
ii	Cirrostratus	
iii	Nimbostratus	

4.

a. Briefly explain the following tools in weather forecasting. (15 marks)

i	Radiosonde	
ii	Satellite	
iii	Radar	

b. Differentiate lightning and thunderstorms (10 marks)

Part II -Answer ONLY TWO Questions

1.

    a. Briefly explain the factors affecting the climate and weather. (20 marks)
    b. Briefly explain the effect of human involvement on weather and climate. (30 marks)

2. Write short notes on any of two (2) of the followings with suitable diagrams.
    a. Rainfall pattern in Sri Lanka (25 marks)
    b. Formation of clouds and rainfall. (25 marks)
    c. El Niño and La Niña patterns (25 marks)

3.

    A. Briefly explain the advantages and the disadvantages of the non-recording type rain gauge (Symon's rain gauge) over recoding type rain gauge. (30 marks)
    B. Briefly explain the three methods of interpretation of rain gauge data. (20 marks)

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