

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**FOURTH YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR  
OF TOURISM**

**NARE 331: CLIMATOLOGY**

**STREAMS: BSC ECOTOURISM (Y3S2)**

**TIME: 2 HOURS**

**DAY/DATE: WEDNESDAY 08/04/2020**

**11.30 A.M. – 1.30 P.M.**

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**INSTRUCTIONS:**

- Answer **ALL** in section A and any other **TWO** in section B.
- Do not write anything on the question paper.

**SECTION A: 30 MARKS**

Q1. Write short notes on the following

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|---|-----------|
| (a) Koppen climate classification           | (3 marks) |
| (b) Climate vulnerability                   | (2 marks) |
| (c) Climate variability                     | (3 marks) |
| (d) Factors creating local or microclimates | (3 marks) |
| (e) Cloud seedling                          | (3 marks) |

Q2. Define the following:

- |                   |           |
|-------------------|-----------|
| (a) Sensible heat | (2 marks) |
| (b) Latent heat   | (2 marks) |

Q3. Using the variables of shortwave radiation (R), Latent heat of vaporization (L) Sensible heat (S) and soil conduction (C), discuss using illustrations, how energy is used in:

- (a) Moist location during night time. (4 marks)
- (b) Moist Location during daytime. (4 marks)
- (c) Dry location during day time. (4 marks)

**SECTION B: 40 MARKS**

- Q4. (a) Discuss the data collection procedures for any one climate variable and the process of analyzing the same data for dissemination. (10 marks)
- (b) Discuss the impacts of climate change on the natural resource systems. (10 marks)
- Q5. (a) Using illustrations, discuss the land surface energy balance. (10 marks)
- (b) Examine the factors that determine the global distribution of temperature. (10 marks)
- Q6. (a) Using an illustration, discuss the components of the hydrologic cycle. (10 marks)
- (b) Discuss the differences in surface runoff, water infiltration and evaporation in urban and rural scenarios. (10 marks)
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