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University Examinations 2022/2023

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF
BACHELOR OF EDUCATION ARTS

EGE 3350: CLIMATOLOGY AND METEOROLOGY

DATE: AUGUST 2023

TIME: 2 HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE (30 MARKS)

- Weather forecasting is the application of current technology and science to predict the state of the atmosphere. Elucidate on the various methods of weather forecasting (10 marks)
- Rise in sea level is one effect of climate change. Elucidate the various ways in which warming temperature contribute to sea level rise (8 marks)
- Describe the various classification of global air masses (8 marks)
- With illustrations, differentiate between the upslope winds and downslope winds (4 marks)

QUESTION TWO (20 MARKS)

- With a clear diagram, explain the vertical thermal structure of the atmosphere (10 marks)
- Elucidate the main components off the atmosphere (6 marks)
- Clearly differentiate between the local winds and monsoon winds (4 marks)

QUESTION THREE (20 MARKS)

- a) Elucidate the key factors that control the weather of a place (10 marks)
- b) Explain the global surface pressure belts found in the world (10 marks)

QUESTION FOUR (20 MARKS)

- a) Variation in solar activity is one of the causes of climate change. Elucidate on the other causes of climate change (10 marks)
- b) The duration of sunshine is measured by use of the Campbell-Stokes recorder. Diagrammatically, elucidate how it works (10 marks)

QUESTION FIVE (20 MARKS)

- a) Changes in weather and climate have effects on flora, fauna soils and human activities. Justify the statement (10 marks)
- b) Koeppen system is one of the approaches to climate classification. Elucidate the climatic zones according to Koeppen (10 marks)