



The Co-operative University College of Kenya
(A Constituent College of Jomo Kenyatta University of Agriculture & Technology)

END OF SEMESTER EXAMINATIONS APRIL-2015

**EXAMINATION FOR THE DEGREE OF BACHELOR OF DISASTER RISK
MANAGEMENT & SUSTAINABLE DEVELOPMENT**

UNIT CODE: CODM 2206

UNIT TITLE: CLIMATOLOGICAL BASIS OF DISASTER MANAGEMENT

DATE: APRIL, 2015

TIME: 9.00 A.M. – 11. 00 A.M.

INSTRUCTIONS:

- Answer question **ONE (compulsory)** and any other **TWO** questions

QUESTION ONE

- (a) Differentiate between weather and climate. (2 marks)
- (b) Discuss the key elements of weather (8 marks)
- (c) Explain the factors that lead to difference in temperature on the earth surface. (6 marks)
- (d) Differentiate between meridional and zonal atmospheric pressure belts on the earth surface. (6 marks)
- (e) Discuss the roles of Kenya Meteorological department in disaster management. (6 marks)

QUESTION TWO

- (a) Define and briefly discuss the following
 - i. Hadley Circulation cell (6 marks)
 - ii. Inter Tropical Zone (6 marks)
- (b) Discuss the key features of disaster profile of sub-Saharan Africa. (8 marks)

QUESTION THREE

- (a) Explain how climate stress contributes to causing disasters. (14 marks)
- (b) Explain measures needed to mitigate impacts of climate stress on sub-Saharan Africa. (6 marks)

QUESTION FOUR

You have been hired as a programme Manager in an organization operating in a region prone to hydro meteorological disasters in which heavy losses of lives and property are experienced every year. You have projected to undertake disaster mitigation measures to reduce reported losses.

- (a) What climatic and contextual information will you seek to guide disaster mitigation measures to put in place in the area? (4 marks)
- (b) Explain the challenges involved in use of climate information for disaster preparedness. (8 marks)
- (c) Discuss the measures which will undertake to enhance use of climate warning information for appropriate response to disasters. (8 marks)

QUESTION FIVE

- (a) Explain the effects of hydro meteorological disasters in Sub-Saharan Africa. (10 marks)
- (b) Discuss the factors that lead to vulnerability to hydro meteorological disasters in Sub-Saharan Africa. (10 marks)