



SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE IN AGROMETEOROLOGY

SMR 659: WEATHER AND CLIMATE IN LIVESTOCK PRODUCTION

DATE: 06TH DECEMBER, 2017

TIME: 2.00 -5.00 PM

INSTRUCTIONS

Answer QUESTION ONE and any other TWO Questions

1. Make brief notes on the following
 - a) Adaptation compared to Acclimation 4 Marks
 - b) Possible impacts of livestock on climate 5 Marks
 - c) Fogger sprayer as a mitigation tool for heat stress 5 Marks
 - d) HTI 5 Marks
 - e) Energy balance of an animal 5 Marks
 - f) Why animals would be scattered rather than crowded in sunny environment 4 Marks
 - g) Why mango trees are not suitable shade trees for cows 2 Marks

2.
 - a). Discuss direct and indirect effects of climate on livestock production 10 Marks
 - b) Suggest strategies for mitigating weather stress on livestock in
 - i) Hot environments 5 Marks
 - ii) Cold environments 5 Marks

3.
 - a) With the help of a sketch diagram, discuss the thermal zones of homeotherms 14Marks
 - b) Discuss the advisability of housing young livestock together with older stock 6 Marks

4. Discuss:
 - a) The heat balance of an animal in enclosure 15 Marks
 - b) The choice of using corrugated iron sheets housing for beef and dairy animals 5 Marks

5. Make brief notes on:
 - a) The suitability of the black head Persian breed of sheep for the dry areas 5 Marks
 - b) The insulating effect of snow 10 Marks
 - c) Environmental modification for livestock comfort 5 Marks