



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

THIRD YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF EDUCATION SCIENCE

KRM 303: FIELD CROPS PRODUCTION

DATE: 18/4/2019

TIME: 2:00 – 4:00 PM

INSTRUCTIONS:

Answer question one and any other two questions

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Explain the following terms
 - i) Euploidy (2 marks)
 - ii) Inbreeding depression (2 marks)
 - iii) Intervarietal hybridization (2 marks)
- b) Differentiate the following terms
 - i) Physiological maturity and harvesting maturity (2 marks)
 - ii) Ploughing and harrowing (2 marks)
- c) Describe the recommended plant spacing that need to be adhered to when growing maize crops (2 marks)
- d) Explain the concept of Ph soil stabilization as a key practice towards achieving optimal crop yields (6 marks)
- e) Discuss the principles of farming systems as applied in crop production (6 marks)
- f) Describe the climatic requirements necessary for wheat production in Kenya (6 marks)

QUESTION TWO (20 MARKS)

- a) Describe the procedure of hybridization method of plant breeding (10 marks)
- b) Discuss the relevance of practicing crop rotations as key strategies towards achieving sustainable crop production (10 marks)

QUESTION THREE (20 MARKS)

Discuss the production of sugarcane in Kenya under the following

- i) Climatic requirements (6 marks)
- ii) Soil requirements (3 marks)
- iii) Processing (7 marks)

QUESTION FOUR (20 MARKS)

- a) Describe **FIVE** factors that a farmer needs to consider in while determining the optimum time to harvest crops (10 marks)
- b) Explain the **FIVE** key problems facing coffee farming in Kenya (10 marks)

QUESTION FIVE

Discuss the production of cowpeas in Kenya under the following

- i) Climatic requirements (6 marks)
- ii) Soil requirements (4 marks)
- iii) Planting (4 marks)
- iv) Harvesting (6 marks)