



EMBU UNIVERSITY COLLEGE

(A Constituent College of the University of Nairobi)

2015/2016 ACADEMIC YEAR

SECOND SEMESTER EXAMINATION

**FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF
MASTER OF SCIENCE (AGROFORESTRY, PLANT BREEDING AND
BIOTECHNOLOGY)**

ACP 612: RESEARCH METHODS AND SCIENTIFIC COMMUNICATION

DATE: APRIL 7, 2016

TIME: 02:00-05:00PM

INSTRUCTIONS:

Answer ANY FOUR Questions

QUESTION ONE

Discuss how the following define research topic.

- i) Statement of research problem (8 Marks)
- ii) Research objectives (6 Marks)
- iii) Research hypothesis (6 Marks)
- iv) Work plan (5 Marks)

QUESTION TWO

- a) Discuss parameters that ensure realization of good results during experimentation (8 Marks)
- b) Explain why it is necessary to address ethical issues before research is carried out (17 Marks)

QUESTION THREE

a) A researcher is breeding a new maize variety and intends to test the following parameters, plant height, grain weight, maturity date, number of cobs per plant and dry matter. Describe unit of measure and most appropriate time of growth to take data.

(10 Marks)

b) Discuss the usefulness of concept mapping approach in determining research topic.

(15 Marks)

QUESTION FOUR

a) Discuss the importance of literature review before undertaking a project. (14 Marks)

b) Describe the importance of formative project evaluation. (11 Marks)

QUESTION FIVE

a) Discuss how randomization can be used to control experimental errors. (5 Marks)

b) You are given three maize varieties to test their performance in two different seasons (Long and short rain). In each season each variety was sown in three different plots (P1, P2 and P3). You are told each plot had three rows and each row had 10 plants. Using letter "x" to indicate a plant, show how the sowing plan will be done.

(20 Marks)

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