



# Machakos University College

University Examinations for 2017/2018 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

Supplementary/Special Examination for

**BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION & EXTENSION**

**BACHELOR OF EDUCATION (AGRICULTURE/BIOLOGY)**

**AEE 222: MEASUREMENTS AND EVALUATION IN AGRICULTURAL EDUCATION  
AND EXTENSION**

Date.....

Time 2hrs

**Instructions: Answer question ONE and any other TWO**

**QUESTION ONE: 30marks (COMPULSORY)**

- a) Giving a relevant example in each case, describe the following scales of measurements
- |                   |      |
|-------------------|------|
| i. Nominal scale  | 2mks |
| ii. Ordinal scale | 2mks |
| iii. Ratio scale  | 2mks |
- b) Choose a topic of your choice in Agriculture with four instructional objectives and plan for its test using a **test table of specification** 6mks
- c) State FOUR ways of measuring reliability of a test 2mks
- d) Differentiate the meaning of the following terms as used in measurements and evaluation in Agriculture
- |   |      |
|---|------|
| i. Examination and Tests                | 2mks |
| ii. Measurement and assessment          | 2mks |
| iii. Summative and formative evaluation | 2mks |
| iv. Test validity and test reliability  | 2mks |

- e) Explain **FOUR** reasons why marking schemes should be prepared at time of test construction 2mks
- f) Discuss **EIGHT** Techniques you can use to curb exam cheating in Kenyan Universities? 4mks

**Question 2: 20 Marks**

- a. Describe **FIVE** guidelines for constructing a multiple choice test in agriculture 5 marks
- b. An agriculture teacher in Tawa secondary school gave an 80 items **MULTIPLE CHOICE TEST** with four options for each item. Kioko, a student guessed all 80 items and scored 20 items correct. The teacher decided to do a correction for guesswork during scoring. Calculate John's corrected score and show your working 5mks
- c. Explain **THREE** types of test validity a teacher should consider during test construction 5mks
- d. Prepare a tool that can be used for assessing field management practices in an agricultural project on cabbage growing in a school farm. 5mks

**Question 3: 20 Marks**

- a. Construct a **THREE** items multiple choice test from any topic in agriculture and prepare the marking scheme 4mks
- b. Describe the **THREE** domains of educational objectives 6mks
- c. Giving a relevant example in each case, explain how the domains in (b) above have been categorized into levels complexity/sophistications 10mks

**Question 4: 20 Marks**

- a. Explain SIX disadvantages of essay items in Agriculture tests 6mks
- b. Construct one essay question (worth 20mks) from any topic in agriculture and prepare a marking scheme for it 14 mks

**Question 5: 20 Marks**

In a class of one hundred (100), students scored marks shown in table 1 below in an agriculture test

Table 1: scores obtained by students in an agriculture test

Scores interval	frequency
60-62	5
63-65	8
66-68	42
69-71	27
72-74	8

- a. Calculate the class mean score and show your working 5mks
- b. Calculate the variance 5mks
- c. Calculate the standard deviation of the scores 4mks
- d. With an aid of a histogram and a frequency polygon show how the teacher can display the marks shown in table above to enhance quick interpretation of the marks.(use the graph paper at the back of exam booklet) 6mks

**END**