MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

SECOND YEAR SECOND SEMISTER EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

AEE 222: MEASUREMENT AND EVALUATION IN AGRICULTURAL EDUCATION AND EXTENTION

DATE: 25/5/2022 **TIME: 2.00-4.00 PM**

INSTRUCTIONS:

Answer *ALL* questions from Section A and any other *TWO* from Section B:

SECTION A: COMPULSORY: (30 MARKS)

QUESTION ONE (30 MARKS)

a) Describe Five national goals of education in Kenya (5 marks)

b) Explain the meaning of the following terms as used in measurement and evaluation

i. Content validity of a test (2 marks)

ii. Concurrent validity of a test (2 marks)

c) Highlight how a teacher can address the following limitations of essay tests

i. Halo effect (2 marks)

ii. Item-to-item carry over effect (2 marks)

iii. Test -to-test carryover effect (2 marks)

d) John, a student at Kazi Nzuri high school, guessed on all 100-item multiple choice test and scored 20%. Each item had four options. Calculate John's actual score after correction for guessing. (3 marks)

e) Table 1 shows the number of candidates involved in examination cheating in KCPE and KCSE from the year 2000 and 2008

Year	Total number of KCPE candidates	Number of candidates who cheated in KCPE exam	Total number of KCSE candidates	Number of candidates who cheated in KCSE exam
2008	695,732	1,835	305,000	1,419
2007	704,918	1,728	276,239	1,875
2006	666451	308	243,453	679
2005	671,550	353	239,485	379
2004	657,741	391	260,676	1,739
2003	587,961	595	197,420	1,022
2002	540,069	391	198,356	1,265
2001	514350	398	194,883	1,208
2000	481,111	1,499	181,966	2,880

i. Calculate the percentage total number of candidates that were involved in exam cheating from the year 2000 to 2008 in KCPE and KCSE. (3 marks)

ii. Discuss Four reasons that may have led to cheating in both examinations. (4 marks)

f) Prepare a test table of specification for a test in agriculture on the topic "Nursery Management". The total score of the test should be 50. Assume the time allocated for the topic in the syllabus is 6 hours. (5 marks)

SECTION B: (40 MARKS)

QUESTION TWO (20 MARKS)

a) Giving one example in each case, discuss educational objectives in the three domains of learning. (16 marks)

b) Describe four characteristics of a good test (4 marks)

QUESTION THREE (20 MARKS)

Suppose you are a teacher of agriculture at Usafi secondary school and you have just completed the topic "soil formation":

a) Formulate four instructional objectives that you should have achieved from the topic. (4 marks)

b) construct

i. Two True/ False test items from the topic (4 marks)

ii. Two multiple choice questions from the topic (4 marks)

c) Assume you have been identified by KNEC to design an assessment tool for the agriculture projects undertaken by form four candidates. Prepare the assessment tool for a project on "cabbage growing" (10 marks)

QUESTION FOUR (20MARKS)

a) Discuss Ten factors that should be considered when constructing a multiple-choice test. (10 marks)

b) Explain the correct procedure that should be followed in administering a test. (10 marks)

QUESTION FIVE (20 MARKS)

In a class of 40, students obtained the following marks in an agriculture test

40	15	39	30	29	15	36	56	40	40	30	25
45	19	25	40	20	70	43	39	60	80	78	28
36	38	10	40	28	24	34	41	30	58	23	33
67	60	23	69								

a) Using appropriate class intervals, tabulate the marks in a frequency distribution table (6 marks)

b) Calculate the mean mark, variance and standard deviation for the students' scores (7 marks)

c) Construct a Frequency polygon using data from the frequency distribution table (5 marks

d) Comment on the class performance in the agriculture test (2 marks)