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UNIVERSITY OF SWAZILAND

2nd SEM. 2018/2019

FINAL EXAMINATION PAPER

PROGRAMME: B.Sc. ANIMAL SCIENCE (DAIRY) YEAR 3

COURSE CODE: AS 308

TITLE OF PAPER: RESEARCH METHODS

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS

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QUESTION 1

Compare and contrast between fundamental and applied research. Use examples to illustrate your answer.　(25 Marks)

QUESTION 2

    a) Briefly discuss the first four steps of the scientific method.　(10 Marks)

    b) Discuss the characteristics of a good research problem statement.　(15 Marks)

QUESTION 3

Briefly discuss four types of sampling techniques under probability sampling.　(25 Marks)

QUESTION 4

Write short notes on the following:

(a) Cardinal numbers　(10 Marks)

(b) Observational research　(10 Marks)

(c) Quantitative data　(5 Marks)

QUESTION 5

An experiment is being planned to compare the rate of gain in bream fish fed on three different diets. The fish will be kept in 15 similar ponds. There was difficulty to source all the fish from the same farm; therefore, they will be purchased from three different breeders with each breeder supplying 100 fish. You are to use as many fish as you can but it is not a requirement to use all of them.

    a) Identify the treatment in this study.　(2 Marks)

    b) Identify the factor that might be used as a blocking factor, if any. Explain why you would consider this to be a blocking factor and not a treatment.　(5 Marks)

c) Present a possible layout of the experiment, showing the number of fish to be used.   **(8 Marks)**

d) Describe the randomization and blocking procedure.   **(8 Marks)**

e) What is the experimental design in this study?   **(2 Marks)**