



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
RISET DAN TEKNOLOGI
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MIDDLE TEST SEMESTER I 2019/2020

Lecture	: ANIMAL BREEDING	Class S
Day/Date	: Wednesday/ 9 Oct 2019	
Lecturer	: Prof. Dr. Ir. V. M. Ani Nurgartiningih, MSc.	CLOSE BOOK

1. Explain the meaning and the use of Genetic Correlation! (Score 20)
2. Explain the meaning of this statement: Repeatability is the upper limit of the Heritability! (Score 20)
3. Eleven sires of Madura cattle, each was mated to 5 (five) dams and each pair produced only 1 (one) offspring. The result of variance analyses on the Chest Girth of the offspring is presented in the ANOVA Table.
 - a. Complete the ANOVA Table and calculate the heritability value for body weight in Madura cattle! (Score 20)
 - b. Explain the meaning of the heritability value! (Score 10)

Table of ANOVA

Source of Variation	Sum of Square
Between Sire	243.37
Within Sire	612.77
Total	856.14

4. Here are the data of Bali cattle: Body weight of sire = 433 kg; Mean of population = 409 kg; The Heritability for body weight = 0.56.
 - a. Calculate the relative Breeding Value (BV) for body weight of sire! Explain the meaning! (Score 15)
 - b. Calculate the expected genetic value of progeny and explain the meaning, if that sire mated to female Bali cattle, randomly! (Score 15)

GOOD LUCK!