

***Ministry of High Education Animal Resource Department***

***University of Salahaddin 3th Stage***

***College of Agriculture Time: 1 h***

***Q1:*** *Define the following terms (Answer only five)(25)*

*Heritability , Line breeding, Natural selection, Repeatability, Out breeding, Selection differential, Heterosis.*

***Q2:*** *From**the following ANOVA table calculate Heritability (h****²*** *)if you know that K=9?*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Source* | *d.f.* | *Sum of square* | *Mean square* | *EMS* |
| *Between sires*  *Progeny within sires* | *4*  *40* | *16176*  *72344* | *-------------*  *--------------* | *Ϭ2 w+K Ϭ2 s*  *1809* |

***Q3/A:*** *Mention types of selection according to the multiple trait? And which type is the best write about it?*

***Q3/B:*** *If we have 10 cows and their daily milk weight 10, 8 , 8.5, 13, 12.7, 20, 11.8,15, 9,18 kg their mean =12.6 kg .if we choose 10% and30% from this cows , Calculate selection differential?*

***Q4/A:*** *Calculate Repeatability from the analysis of variance if you know that K=6?*

|  |  |  |  |
| --- | --- | --- | --- |
| *Source* | *d.f.* | *Mean square* | *EMS* |
| *Between animals*  *Bet. Record within animal* | *9*  *50* | *0.2988*  *0.0894* | *Ϭ2 w+K Ϭ2 a*  *Ϭ2 w* |

***Q4/B:*** *Write**types of Heterosis ?*

***GOOD LUCK***

***Parizan Wshyar***

***Assist.lecturer***