STAT 462: Final Exam-FA20

Quiz Instructions

By opening this exam:

> **you acknowledge that you understand the academic integrity policy as outlined in the course syllabus.**
> **you acknowledge that posting any content from this exam to any online site outside of this course is grounds for an academic integrity violation.**
> **you acknowledge that copying answers from any source is grounds for an academic integrity violation.**
> **you acknowledge that sharing any or all parts of this exam with any other person is grounds for an academic integrity violation.**

This is an open book exam. You can use class material, R/Rstudio, class textbook, STAT 462 online notes. However, you are not allowed to get help from classmates or any third party such as online tutors.

Final exam window is open from 6:00 am (ET) through 4:20 pm (ET) on Monday December 14th. Within this time window you get one hour and 50 minutes complete and submit the exam.

Please note that you get only one attempt for the exam. So do not click on the exam unless you are ready to sit down and take it.

Once you click on the link to the exam, you will have 1 hour and 50 minutes to complete and submit the quiz. There is a timer associated with the quiz. The timer is set for 1 hour and 50 minutes. Even if you close the internet browser the clock will keep running. Canvas will report how long it took to complete the quiz. **After the allocated time (1 hours and 50 minutes) , the quiz will automatically close and you will no longer be able to submit**.

Question 13	15 pts

Below provided information is relevant for Questions 17 through 21 (please note that this will be labeled as question 13 in the Canvas quiz as some of the previous questions had multiple parts)

A researcher has collected data on the weight and the wing length of 95 Savannah

sparrows in Kent Island. She has produced below regression output from this data. Use this output to answer below questions.

```
                                                          Anal
Call:
lm(formula = Weight ~ WingLength, data = Sparrows2)       Resp

Residuals:                                                Wing
    Min      1Q   Median      3Q      Max                 Resi
-2.91692 -0.86402 -0.01547  0.98743  2.99830
                                                          ---
                                                          Sigr
Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept) -2.32729    0.98682  -2.358   0.0204 *
WingLength   0.60145    0.03554  16.922   <2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1


Multiple R-squared:  0.7549,    Adjusted R-squared:  0.7522
F-statistic:[                    ]  p-value:[            ]
```

Question 17: Response variable in the fitted regression model is

    (a). Weight

    (b). Wing length

    (c). Savannah sparrows

    (d). None of the above

The correct answer to question 17 is (b)

Question 18: Estimated slope of the fitted least squares regression is

    (a). -2.3273

    (b). 0.9868

    (c). 0.6015

    (d). 0.0355

The correct answer to question 18 is (c)

Question 19: Estimated standard error of the $\hat{\beta}_1$ is

    (a). -2.3273

    (b). 0.6015

    (c). 0.9868

    (d). 0.0355

The correct answer to question 19 is   (d) ⌄

Question 20: Residual degrees of freedom (i.e.: error degrees of freedom) associated with this model is

    (a). 1

    (b). 95

    (c). 94

    (d). 93

    (e). None of the above
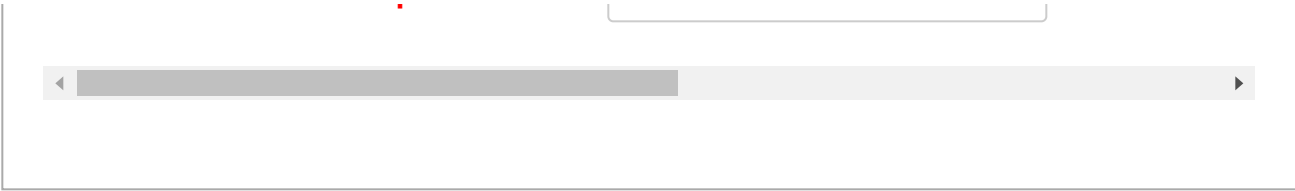
The correct answer to question 20 is   (d) ⌄

Question 21: F test statistic and the P value on the ANOVA table would be

    (a). F test statistic =-2358 and P value = 0.0204

    (b). F test statistic =286.35 and P value$< 2 \times 10^{-16}$

    (c). F test statistic =16.922 and P value$< 2 \times 10^{-16}$

    (d). F test statistic =286.35 and P value = 0.0204

    (e). Provided information is not enough to find the F test statistic and the P value on the ANOVA table

The correct answer to question 21 is   [Select]   ⌄

No new data to save. Last checked at 1:13pm   Submit Quiz