



KOLEJ UNIVERSITI ISLAM PERLIS

**BVM4003
APPLIED STATISTICS
ASSIGNMENT**

/20%

INSTRUCTION

1. This assignment should be solve in a group of **THREE / FOUR** students.
 2. Perform all analyses using **SPSS**.
 3. Submit a **softcopy report** to my email address
 4. Due date for this assignment is **20th December 2021, before 5 pm**.
 5. **Late submission will not be entertained.**
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Answer ALL the following questions.

Question 1: Hypothesis Testing

100 students in KUIPs are selected to be a sample to study the differences of **CGPA** on **genders**. Based on the given data (refer *Data Sept2122*);

- a) conduct homogeneity of variance test at 5% significance level.
 - b)
 - c) is there a significant difference in the mean of CGPA on genders at 5% significance level?
- (Marks : 6%)

Question 2 : Two-way ANOVA

Based on *Data Sept2122*, a researcher was interested in whether an individual's **CGPA** was influenced by their **level of education** and **factors affecting academic performance (Study habits)**. At 5% significance level, perform a two-factor analysis of variance, and determine the following.

- a) Obtain descriptive statistics for the above data.
- b) Is there any interaction effect between level of education and factors affecting academic performance (Study habits) on individual's CGPA?
- c) Is there any effect of level of education on individual's CGPA?
- d) Is there any effect of factors affecting academic performance (Study habits) on individual's CGPA?
- e) Conclude your findings.

(Marks : 7%)

Question 3 : Multiple Linear Regression

Based on *Data Sept2122*, a researcher was interested to determine whether **Challenges during online classes** have effects on **CGPA**. At 5% significance level, perform a multiple linear regression, and determine the following.

- a) Based on Model Summary, interpret the values of coefficient of correlation and determination.
- b) Write the multiple linear regression equation and interpret the values.
- c) Is there a significant relationship between dependent variable and independent variables at 0.05 level of significance?
- d) At 0.05 level of significance, determine whether each independent variable contributes to the regression model.
- e) Conclude your findings.

(Marks : 7%)

REFERENCES

Hypothesis Testing

<https://youtu.be/8alv3kZt8Ug>

Two-factor Analysis of Variances

<https://statistics.laerd.com/spss-tutorials/two-way-anova-using-spss-statistics-2.php>

Multiple Linear Regression

<https://statistics.laerd.com/spss-tutorials/multiple-regression-using-spss-statistics.php>



KOLEJ UNIVERSITI ISLAM PERLIS

**BQT4043
BUSINESS STATISTICS**

ASSIGNMENT

SUBMITTED TO:

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PREPARED BY:

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GROUP :

SUBMISSION DATE:

20th December 2021