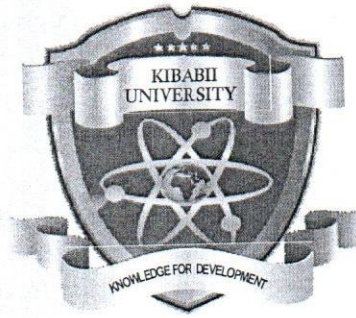


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*(Knowledge for Development)*

**KIBABII UNIVERSITY**

**UNIVERSITY EXAMINATIONS  
2017/2018 ACADEMIC YEAR**

**SPECIAL/SUPPLEMENTARY EXAMINATIONS  
YEAR THREE SEMESTER TWO  
EXAMINATIONS**

**FOR THE DEGREE OF  
BACHELOR OF INFORMATION TECHNOLOGY**

**COURSE CODE : BIT 323**

**COURSE TITLE : ATA ANALYSIS  
TECHNIQUES**

**DATE: 17/10/2018**

**TIME: 9.00A.M. – 11.00A.M.**

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**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTIONS ONE AND ANY OTHER TWO.**

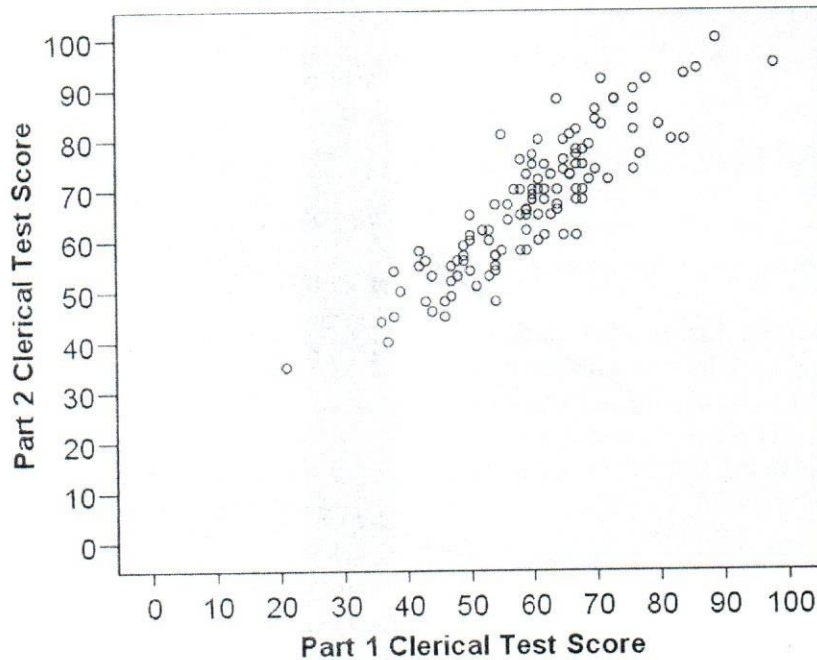
*Answer question one and any other two*

**Question one**

- (a) Describe the difference between data view and variable view in the SPSS data editor
- (b) The Frequency procedure in SPSS contains a Chart option that lets you choose between a Bar Chart, a Pie Chart and a Histogram. The Bar Chart and Histogram look somewhat alike, what's the difference between the two?
- (c) List with details, three compulsory and five optional requirements in creating a data file
- (d) Income can be measured on several levels. Describe how income could be measured as an ordinal, interval and ratio measure.
- (e) Enumerate 4 ways in which SPSS can transform data

**Question two**

Consider the following SPSS output



### Correlations

		PSA: Clerical Speed Adjusted Total Part 2	PSA: Clerical Speed Adjusted Total Part 1
PSA: Clerical Speed Adjusted Total Part 2	Pearson Correlation	1	.882
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	19759.948	16207.026
	Covariance	173.333	142.167
	N	115	115
PSA: Clerical Speed Adjusted Total Part 1	Pearson Correlation	.882	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	16207.026	17072.487
	Covariance	142.167	149.759
	N	115	115

- (i) Looking at the scatterplot, describe the relationship in terms of direction, form, and degree.
- (ii) What is the largest absolute value a correlation can take?
- (iii) Can we justifiably say that part 1 test score caused their part 2 test score?
- (iv) The sample was made up of roughly 25% first year psychology students and 50% friends of one of the researchers typically aged around 22 and 25% parents of friends of the researchers. do you think restricted range might be an issue here?
- (v) Are there any extreme scores?
- (vi) If instead of using the raw scores, we used the rank of each participant, and performed a correlation on these ranks, what type of correlation would we have?
- (vii) If we split part 1 scores into high and low groups and correlated it with the raw version of part 2, what type of correlation would we have?
- (viii) Is the correlation statistically significant? What is our df, what is critical r (two-tailed) in G&W?

### Question three

A matrix B is given by  $B = [1,4,3,2; 2,1,3,2; 1,2,3,4; 5,2,1,4]$

- (a). Describe how you can extract a  $2 \times 2$  matrix from the third row and second column (4 marks).
- (b). Explain how you can determine Mean, Standard Deviation of the first two columns of matrix B (6 marks)
- (c). The correlation coefficients of rows and columns in matrix B can be given by:

1.0000   -0.3149   -0.9685   0.4575  
 -0.3149   1.0000   0.1325   -0.2294



-0.9685 0.1325 1.0000 -0.5774

0.4575 -0.2294 -0.5774 1.0000

(i) . Describe how you can generate such correlation coefficients from matrix B using a MATLAB command .Explain statistical interpretations and importance of three sets of columns whose correlation coefficients are 1,0 and -1 respectively (10 marks)

#### Question four

- a) In SPSS, how can one combine values of a variable into smaller number of categories?
- b) Describe how you can create new variables out of old ones using COMPUTE
- c) Briefly describe how you can carry out the following procedure
  - (i) Descriptives
  - (ii) explore

#### Question five

##### Sample questionnaire

1. Sex \_\_\_ Male \_\_\_ Female

2. Age in years \_\_\_\_\_

3. Education level (please indicate the highest level of schooling that you completed)

\_\_\_ Year 10 \_\_\_ Year 12 \_\_\_ University or College

4. Are you currently on a diet to lose weight? \_\_\_ Yes \_\_\_ No

Please indicate how much you either agree or disagree with each of the following statements.

Write a number from 1 to 4 on the line next to each statement.

**strongly disagree 1 2 3 4 strongly agree**

1. \_\_\_\_\_ I have little control over the things that happen to me

2. \_\_\_\_\_ I can do just about anything I really set my mind to

3. \_\_\_\_\_ There is really no way I can solve some of the problems I have

4. \_\_\_\_\_ There is little I can do to change many of the important things in my life

5. \_\_\_\_\_ What happens to me in the future mostly depends on me

6. \_\_\_\_\_ I often feel helpless in dealing with the problems of life

7. \_\_\_\_\_ Sometimes I feel that I'm being pushed around in life

- 
- a) Prepare a codebook for this questionnaire, detailing each of the variable names and codes to be used to prepare the data for entry into SPSS.
  - b) Using the codebook you developed, describe how you would create value labels for Question 3 (Education level). Describe the steps you would use in SPSS.
  - c) Using SPSS, create a new data file for this questionnaire. Enter some pretend data in this data file (for at least five cases).