Course Work

1. a) What determines whether you will be using a parametric test or non-parametric test? Your explanation should include the type of data.

   b) What are two assumptions that you can check using exploratory data analysis (EDA)?

   c) For each of the assumption, explain the expected value/s for the statistic tests and/or show the expected plots.

   d) Give the hypotheses tested for each of the above assumptions.

   (10 marks)

2. How many techniques do you know in deciding the number of factors to retain in a factor analysis? Explain one of them.

   (10 marks)

3. Refer to the output on reliability analysis for money attitude that has six items and answer the following questions.

   a) Explain the meaning of the Cronbach's alpha value.

   b) Decide on the value of reliability by referring to the inter-item correlation matrix, corrected item-total and alpha if item deleted.

   c) What does the squared multiple correlation in the item-total summary statistic table means?

   (10 marks)

Scale: ALL VARIABLES

Table 3.1

Reliability Statistics

Cronbach's Alpha	N of Items
.933	6

Table 3.2: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I use money to influence people to do things for me.	22.13	44.910	.679	.936
I own nice things in order to impress people.	21.99	43.662	.741	.928
I behave as if money is the ultimate symbol of success	21.77	41.670	.865	.912
I must admit that I purchase things because I know they will impress others.	21.93	41.572	.846	.915
I seem to find that I show more respect to people with money more than I have.	21.78	42.435	.853	.914
I place too much emphasis on the money a person has as a sign of his success.	21.95	41.659	.834	.916

Table 3.3: Scale Statistics

Mean	Variance	Std. Deviation	N of Items
26.31	60.604	7.785	6

Table 3.4: Inter-Item Correlation Matrix

	I use money to influence people to do things for me.	I own nice things in order to impress people.	I behave as if money is the ultimate symbol of success	I must admit that I purchase things because I know they will impress others.	I seem to find that I show more respect to people with money more than I have.	I place too much emphasis on the money a person has as a sign of his success.
I use money to influence people to do things for me.	1.000	.558	.613	.638	.639	.582
I own nice things in order to impress people.	.558	1.000	.732	.650	.657	.668
I behave as if money is the ultimate symbol of success	.613	.732	1.000	.812	.780	.782
I must admit that I purchase things because I know they will impress others.	.638	.650	.812	1.000	.789	.765
I seem to find that I show more respect to people with money more than I have.	.639	.657	.780	.789	1.000	.811
I place too much emphasis on the money a person has as a sign of his success.	.582	.668	.782	.765	.811	1.000

4. By referring to the output given from an ANOVA test for the differences in emotional and physical health based on the three states in Malaysia, answer the following questions. The states are Perak (coded as 1), Selangor (coded as 2) and Melaka (coded as 3).

a) Give support that the assumptions for ANOVA are fulfilled.

b) Create the related hypotheses for the differences in emotional and physical health based on the three states.

c) Determine the results of the hypotheses testing.

c) Discuss the multiple comparisons for the states.

(10 marks)

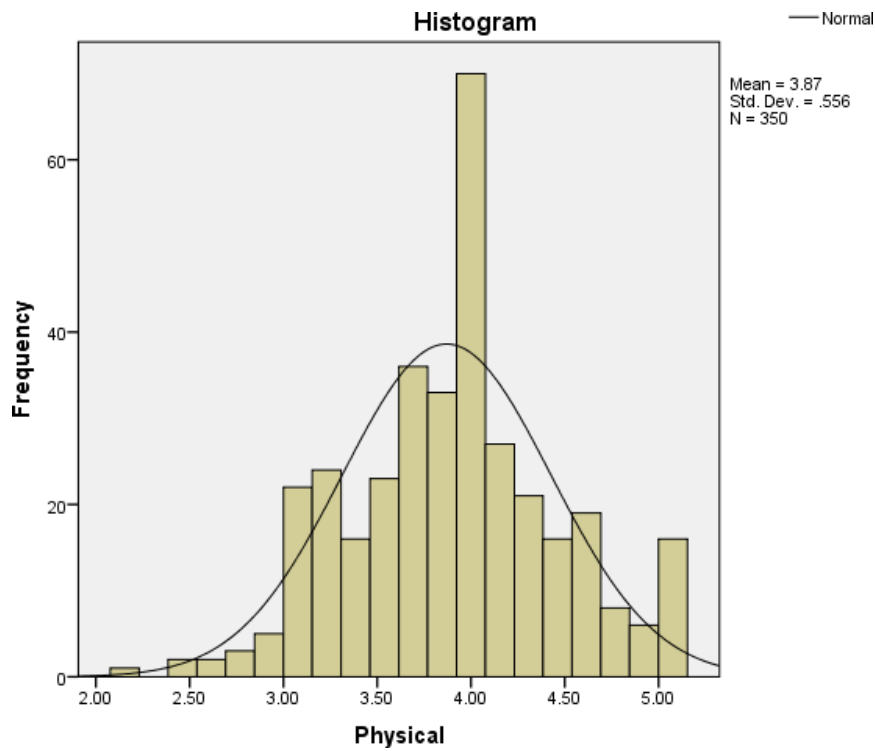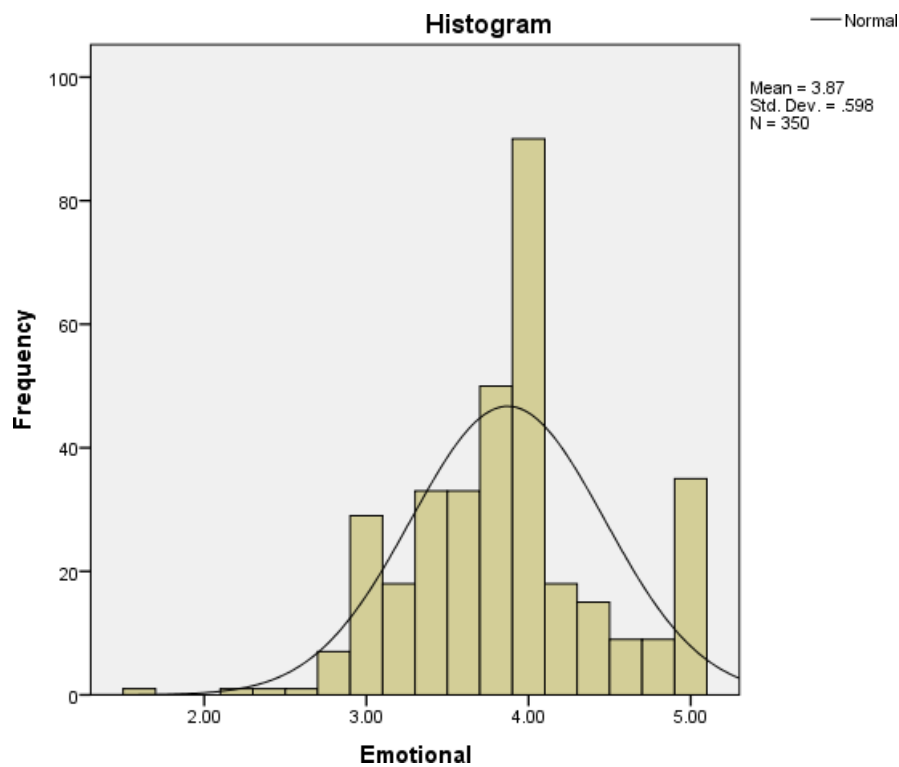**Table 4.1: Histogram for Physical Health**

Histogram

Mean = 3.87
Std. Dev. = .556
N = 350

Table 4.2: Histogram for Emotional Health

Histogram

Mean = 3.87
Std. Dev. = .598
N = 350

Oneway

Table 4.3: Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
Emotional	1.00	207	3.7710	.57819	.04019	3.6918	3.8502	1.60	5.00
	2.00	89	4.0180	.57969	.06145	3.8959	4.1401	2.40	5.00
	3.00	51	4.0275	.62228	.08714	3.8524	4.2025	2.80	5.00
	Total	347	3.8720	.59633	.03201	3.8091	3.9350	1.60	5.00
Physical	1.00	207	3.8406	.53579	.03724	3.7672	3.9140	2.15	5.00
	2.00	89	3.9421	.58815	.06234	3.8182	4.0660	2.54	5.00
	3.00	51	3.8552	.55972	.07838	3.6978	4.0126	2.46	5.00
	Total	347	3.8688	.55322	.02970	3.8104	3.9272	2.15	5.00

Table 4.4: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Emotional	.965	2	344	.382
Physical	.935	2	344	.394

Table 4.5: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Emotional	Between Groups	5.240	2	2.620	7.651	.001
	Within Groups	117.799	344	.342		
	Total	123.039	346			
Physical	Between Groups	.652	2	.326	1.066	.345
	Within Groups	105.241	344	.306		
	Total	105.894	346			

Post Hoc Tests Scheffe

Table 4.6: Multiple Comparisons

Dependent Variable	(I) state	(J) state	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Emotional	1.00	2.00	-.24696*	.07417	.004	-.4293	-.0646
		3.00	-.25644*	.09148	.021	-.4813	-.0315
	2.00	1.00	.24696*	.07417	.004	.0646	.4293
		3.00	-.00947	.10277	.996	-.2621	.2432
	3.00	1.00	.25644*	.09148	.021	.0315	.4813
		2.00	.00947	.10277	.996	-.2432	.2621
		3.00	-.01462	.08647	.986	-.2272	.1980

*. The mean difference is significant at the 0.05 level.

END OF QUESTIONS