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Family Name					
Given Name/s					
Student Number					
Teaching Period	Semester 2, 2017				

PSY347 – Advanced Research Design and Analysis	DURATION	
	Reading Time:	10 minutes
	Writing Time:	180 minutes
INSTRUCTIONS TO CANDIDATES		
The examination has 3 sections		
Section A: Suggested Time: 60 min	Multiple Choice Questions: Answer ALL 60 questions 30 Marks	
Section B: Suggested Time: 60 min	Short Answer Questions: Answer ALL 6 questions 30 Marks	
Section C: Suggested Time: 60 min	Short Essay Questions: Answer ALL 2 questions 40 Marks	
<ul style="list-style-type: none"> ○ Please ensure that your Name and Student Number are written clearly in the space provided at the top of the Answer Sheet and Answer Booklet. ○ Section A must be answered on the Answer Sheets provided and must be handed in with your Answer Booklet. ○ Sections B & C are to be answered in the 1 x 8 page Answer Booklet. Note that questions ARE NOT of equal value. 		
EXAM CONDITIONS		
<u>You may begin writing from the commencement of the examination session.</u> The reading time indicated above is provided as a guide only.		
This is an OPEN BOOK examination		
Any calculator is permitted		
Any handwritten material is permitted		
Any hard copy, English dictionary is permitted (annotated allowed)		
ADDITIONAL AUTHORISED MATERIALS	EXAMINATION MATERIALS TO BE SUPPLIED	
Any printed material with the exception of CDU Library books	1 x 8 Page Book 1 x 4-Multiple Choice Answer Sheet 2 x Scrap Paper	

**THIS EXAMINATION IS PRINTED
DOUBLE-SIDED.**

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LEFT BLANK.**

Section A
Multiple Choice Questions
Total No of Marks for this section: 30 Marks

This section should be answered on the Answer Sheet provided. Please ensure that your name and student number have been written on the Answer sheet and placed in the completed answer Booklet.

Marks for each question are indicated. Suggested Time allocation for Section A: 60 mins

Section B

Short answers

Total No of Marks for this section: 30 Marks

This section should be answered in the Answer Booklet provided.

Marks for each question are indicated. Suggested Time allocation for Section B: 60 mins

Question 1

Define each of the following and give a clear-cut, unambiguous example of a variable measured at each level.

- a. nominal scale of measurement
- b. ordinal scale of measurement
- c. interval scale of measurement
- d. ratio scale of measurement

(Marks: 5)

Question 2

Suppose that an analysis of variance results in the f statistic of $F_{obs} = 1.0$. Would you say that the groups were significantly different from each other? Why or why not?

(Marks: 5)

Question 3

Define each of the two following terms:

- a. main effect
- b. interaction

(Marks: 5)

Question 4

Write out the equation for the regression line for predicting Y from X and describe each component.

(Marks: 5)

Question 5

In an independent-samples ANOVA, the total sum of squares is partitioned into two components: $SS_{\text{Between groups}}$ and $SS_{\text{Within groups}}$. How is the total sum of squares partitioned in a repeated-measures ANOVA?

(Marks: 5)

Question 6

What is the major difference between parametric and nonparametric tests?

(Marks: 5)

Section C
Short answers - Interpretation of Results
Total No of Marks for this section: 40 Marks

This section should be answered in the Answer Booklet provided.

Marks for each question are indicated. Suggested Time allocation for Section C: 60 mins

Question 1 of 2.

Your task is to report the results in APA format.

(20 Marks)

A psychologist wishes to know whether the amount of imagery present in a person's inner experience is different for different patient groups. She develops an Imagery Scale and administers it to four groups: Nonpatients, Anxiety Patients, Manic Patients, and Depressed Patients. Below is the data table.

	Non-P	Anxiety	Manic	Depressed
	6	14	12	5
	5	8	13	4
	6	8	9	6
	8	12	14	6
	0	6	10	7
	10	12		1
	7			4
				6
mean	6.00	10.00	11.60	4.88

Is there a difference in amount of imagery between the groups? She performs an analysis of variance, obtaining the following ANOVA summary table:

Source	SS	df	MS	F
Between	191.81	3	63.94	9.50*
Within	<u>148.08</u>	<u>22</u>	6.73	
Total	339.89	25		

* $p < .05$, $F_{cv3,22} = 3.05$

You wished to know if teacher’s gender, teaching experience, and shared values and approach in the school as organizational culture significantly predict teachers’ work meaning. You sampled 1,624 teachers and performed a multiple regression analysis using SPSS. Now you have the output below. **Your task is to report the results in APA format.**

Ensure you read ALL elements of this analysis which continues across more than one page.

Descriptive Statistics

	Mean	Std. Deviation	N
WorkMeaning	6.0145	.25092	1624
Gender	.7691	.42155	1624
TeachingExperience	11.9181	7.98204	1624
SharedValues	5.4047	1.19841	1624

Note. Gender was coded as 0 for males and 1 for females.

Correlations

		WorkMeaning	Gender	TeachingExperience	SharedValues
Pearson Correlation	WorkMeaning	1.000	.099	.000	.333
	Gender	.099	1.000	.017	.062
	TeachingExperience	.000	.017	1.000	.132
	SharedValues	.333	.062	.132	1.000
Sig. (1-tailed)	WorkMeaning	.	.000	.493	.000
	Gender	.000	.	.241	.006
	TeachingExperience	.493	.241	.	.000
	SharedValues	.000	.006	.000	.
N	WorkMeaning	1624	1624	1624	1624
	Gender	1624	1624	1624	1624
	TeachingExperience	1624	1624	1624	1624
	SharedValues	1624	1624	1624	1624

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	5.617	.029		193.871	0.000					
Gender	.047	.014	.079	3.370	.001	.099	.083	.079	.996	1.004
TeachingExperience	-.001	.001	-.045	-1.913	.056	.000	-.047	-.045	.983	1.018
SharedValues	.070	.005	.335	14.195	.000	.333	.333	.331	.979	1.021

a. Dependent Variable: WorkMeaning