

**Part I: Federation Methods**

**(Fall 1999)**

(Remember WRITE ONLY ON EVERY OTHER LINE  
on ONE SIDE OF THE PAPER)

Choose one of the following:(A or B)

A. Define the concept of triangulation in research. Design a study which will use triangulation as a methodology.

OR

B. What is the difference between a unit of observation and a unit of analysis? Design a sampling frame where the unit of analysis is at the household level.

Choose one of the following (C or D)

C. You have been asked to design a scale to measure \_\_\_\_\_(choose your concept). Outline the steps you would take in developing your scale. What major decisions would you have to make in designing your scale? Address yourself to such problems as (a) sampling of item content, (b) selecting responses to items, (c) selecting a system of scoring items, and (d) testing for reliability and validity of items.

OR

D. How does one approximate the conditions of an experimental design using survey data?

**Part II. FEDERATION STATISTICS****(Fall 1999)**

**A.** For six of the following pairs discuss what factor(s) must be taken into consideration in choosing between these two statistical techniques for use in the analysis of data.

- a. t test and z test
- b. Chi square and lambda
- c. PRE and non-PRE measures of association
- d. Pearson's r and Spearman's rho
- e. Eta and Pearson's r
- f. Lambda and c
- g. r and partial r
- h. Discriminant analysis and loglinear
- i. Linear correlation and linear regression

- B.**
1. What assumptions must be made to use regression analysis in the analysis of data? Provide a brief description of each assumption. How does one know that the assumptions have been met?
  2. What do each of the following tell us:
    - a. Unstandardized regression coefficients (b)
    - b. Standardized regression coefficients (Beta)
    - c. Level of significance (p)
    - d. Coefficient of determination ( $R^2$ )
  3. Write a brief essay substantively interpreting Table 1 below:

Table 1: Standardized Coefficients of Individual Level Influences on Graduation Exit Examination Scores

	Model 1	Model 2
Homework hours	-.005 (.004)	-.006 (.004)
Reading Hours	.026** (.004)	.029** (.004)
T.V. Hours	-.048** (.002)	-.035** (.002)
Activity Hours	.082** (.002)	.062** (.002)
Work Hours		-.090** (.002)
Constant	-.329 (.179)	-.863 (.179)
$R^2$	.162	.195
N	35,059	33,516

Standard errors are in parentheses

\* p<.05

\*\* p<.01

## C: Interpretation of Tables

Write a brief essay substantively interpreting the tables below:

<b>Table 2: Attitude Toward Premarital Sex, in Percentages</b>		
	<i>Sex</i>	
<i>Attitude Toward Premarital Sex</i>	Male	Female
Approve	36	39
Disapprove	64	61
(N=1000)	100%	100%

<b>Table 2a: Attitude Toward Premarital Sex, by Sex, by Family Religiosity, in Percentages</b>				
	<i>Family Religiosity</i>			
	<i>Not Highly Religious</i>		<i>Highly Religious</i>	
	<i>Sex</i>		<i>Sex</i>	
<i>Attitude Toward Premarital Sex</i>	Male	Female	Male	Female
Approve	76	75	10	15
Disapprove	24	25	90	85
	100%	100%	100%	100%
	(N=400)		(N=600)	

<b>Table 2b: Attitude Toward Premarital Sex, by Sex, by Residence, in Percentages</b>				
	<i>Residence</i>			
	<i>Urban</i>		<i>Rural</i>	
	<i>Sex</i>		<i>Sex</i>	
<i>Attitude Toward Premarital Sex</i>	Male	Female	Male	Female
Approve	62	25	11	58
Disapprove	38	75	89	42
	100%	100%	100%	100%
	(N=500)		(N=500)	