



Review Test Submission: PLS

User	Richa Singh
Course	(MERGED) ACN 7310.002 - HCS 7310.002 - F18
Test	PLS
Started	11/3/18 2:41 AM
Submitted	11/3/18 8:50 PM LATE
Due Date	11/3/18 8:00 PM
Status	Completed
Attempt Score	73.66667 out of 100 points
Time Elapsed	18 hours, 9 minutes
Results Displayed	All Answers, Submitted Answers, Correct Answers

Question 1

7 out of 10 points

Partial least square (PLS) methods and canonical correlation analysis (CCA) are used to analyze the relationship between **[a]**. The two basic types of PLS are PLS **[b]** and PLS **[c]**; the first one conducts a(an) **[d]** projection, and the second one a(an) **[e]** projection. In PLSC and CCA, a **[f]** matrix of the two data tables is analyzed with an SVD. From the SVD, we can project observations from the two tables onto the components to create **[g]**. PLSC finds a pair of latent variables with maximum **[h]**. Having different **[i]** than PLSC, CCA finds the pair of latent variables with maximum **[j]**.

Specified Answer for: a ☒ two data tablesSpecified Answer for: b ☒ CorrelationSpecified Answer for: c ☒ RegressionSpecified Answer for: d ☒ orthogonalSpecified Answer for: e ☒ orthogonalSpecified Answer for: f ☒ correlationSpecified Answer for: g ☒ latent variablesSpecified Answer for: h ☒ covarianceSpecified Answer for: i ☒ goalSpecified Answer for: j ☒ correlation**Correct Answers for: a**

Evaluation Method	Correct Answer	Case Sensitivity
<input checked="" type="checkbox"/> Exact Match	two data tables	
<input checked="" type="checkbox"/> Exact Match	two matrices	

Correct Answers for: b

Evaluation Method	Correct Answer	Case Sensitivity
-------------------	----------------	------------------

✔ <i>Exact Match</i>	correlation	
✔ <i>Exact Match</i>	regression	
Correct Answers for: c		
Evaluation Method	Correct Answer	Case Sensitivity
✔ <i>Exact Match</i>	regression	
✔ <i>Exact Match</i>	correlation	
Correct Answers for: d		
Evaluation Method	Correct Answer	Case Sensitivity
✔ <i>Exact Match</i>	symmetric	
✔ <i>Exact Match</i>	asymmetric	
Correct Answers for: e		
Evaluation Method	Correct Answer	Case Sensitivity
✔ <i>Exact Match</i>	asymmetric	
✔ <i>Exact Match</i>	symmetric	
Correct Answers for: f		
Evaluation Method	Correct Answer	Case Sensitivity
✔ <i>Exact Match</i>	cross-product	
✔ <i>Exact Match</i>	correlation	
Correct Answers for: g		
Evaluation Method	Correct Answer	Case Sensitivity
✔ <i>Exact Match</i>	latent variables	
Correct Answers for: h		
Evaluation Method	Correct Answer	Case Sensitivity
✔ <i>Exact Match</i>	covariance	
Correct Answers for: i		
Evaluation Method	Correct Answer	Case Sensitivity
✔ <i>Exact Match</i>	constraints	
Correct Answers for: j		
Evaluation Method	Correct Answer	Case Sensitivity
✔ <i>Exact Match</i>	correlation	

Question 2

10 out of 10 points

What are factor scores in PCA equivalent to in PLS?

Selected Answer: ✔ a. Latent variables

Answers: ✔ a. Latent variables

b. Saliances

c. Bootstrap ratios

d. Loadings

e. Contributions

Question 3

10 out of 10 points

There are many types of PLS, including:

Selected Answers: ☒ c. PLS-PM

☒ d. PLS-R

☒ h. PLS-C

Answers:

a. PLS-P

b. PLS-READ

☒ c. PLS-PM

☒ d. PLS-R

e. PLS-AM

f. PLS-G

g. PLS-DO

☒ h. PLS-C

Question 4

10 out of 10 points

Please match the descriptions to the methods

Question	Correct Match	Selected Match
PLS-C	<input checked="" type="checkbox"/> b. finds components that maximize the covariance between 2 latent variables computed on 2 quantitative matrices	<input checked="" type="checkbox"/> b. finds components that maximize the covariance between 2 latent variables computed on 2 quantitative matrices
PLS-R	<input checked="" type="checkbox"/> d. finds components that maximize the prediction of one quantitative table from another	<input checked="" type="checkbox"/> d. finds components that maximize the prediction of one quantitative table from another
PLS-CA	<input checked="" type="checkbox"/> a. finds components that maximize the covariance between 2 latent variables computed on 2 contingency tables	<input checked="" type="checkbox"/> a. finds components that maximize the covariance between 2 latent variables computed on 2 contingency tables
CCA	<input checked="" type="checkbox"/> c. finds components that maximize the correlation between 2 latent variables computed on 2 quantitative matrices	<input checked="" type="checkbox"/> c. finds components that maximize the correlation between 2 latent variables computed on 2 quantitative matrices

All Answer Choices

- a.
finds components that maximize the covariance between 2 latent variables computed on 2 contingency tables
- b.
finds components that maximize the covariance between 2 latent variables computed on 2 quantitative matrices
- c.
finds components that maximize the correlation between 2 latent variables computed on 2 quantitative matrices
- d.
finds components that maximize the prediction of one quantitative table from another

Question 5

10 out of 10 points

If two data tables, **X** and **Y**, are centered and normalized, what will their inner product ($\mathbf{R} = \mathbf{Y}^T \mathbf{X}$) be?

Selected Answers: ☒ a. A Burt matrix
☒ e. A rectangular correlation matrix

Answers:
 a. A Burt matrix
 b. A group matrix
 c. A square matrix
 d. A contingency table
☒ e. A rectangular correlation matrix
 f. A rectangular covariance matrix
 g. A diagonal matrix

Question 6

10 out of 10 points

If the columns of two data tables, **X** and **Y**, are centered (and not normalized), what will their inner product ($\mathbf{R} = \mathbf{Y}^T \mathbf{X}$) be?

Selected Answers: ☒ a. A group matrix
☒ b. A rectangular covariance matrix

Answers:
 a. A group matrix
☒ b. A rectangular covariance matrix
 c. A Burt matrix
 d. A square matrix
 e. A diagonal matrix
 f. A rectangular correlation matrix
 g. A contingency table

Question 7

10 out of 10 points

When would PLS-C on matrices **X** and **Y** become equivalent to PCA? Select the combination that must be true.

Selected Answers: ☒ c. **X** and **Y** are the same
☒ g. **X** and **Y** are data tables with quantitative data
☒ i. **X** is centered
☒ k. **Y** is centered

Answers:
 a. **X** and **Y** are Burt matrices
 b. **X** is not centered
☒ c. **X** and **Y** are the same
 d. **X** and **Y** are contingency tables
 e. **X** and **Y** are design matrices
 f. **Y** is not centered
☒ g. **X** and **Y** are data tables with quantitative data
 h. **X** and **Y** are data tables with 1s and 0s
☒ i. **X** is centered
 j. You can't make PCA and PLS equivalent
☒ k. **Y** is centered

I. The SVD constraints have to change

Question 8

0 out of 10 points

From Question 7, why?

Selected Answer: [None Given]

Correct Answer: [None]

Question 9

6.66667 out of 10 points

When would PLS-C on matrices **X** and **Y** become equivalent to CA? Select the combination that must be true.

Selected Answers: ☒ b. **X** and **Y** are data tables with quantitative data☒ c. **X** and **Y** are data tables with 1s and 0s☒ d. **Y** is not centered☒ h. **X** and **Y** are contingency tables☒ k. **X** and **Y** are design matrices☒ l. **X** is not centered

Answers:

a. **X** is centeredb. **X** and **Y** are data tables with quantitative data☒ c. **X** and **Y** are data tables with 1s and 0sd. **Y** is not centerede. **X** and **Y** are the samef. **Y** is centered☒ g. The SVD constraints have to changeh. **X** and **Y** are contingency tables

i. You can't make CA and PLS equivalent

j. **X** and **Y** are Burt matrix☒ k. **X** and **Y** are design matricesl. **X** is not centered

Question 10

0 out of 10 points

From Question 9, why?

Selected Answer: [None Given]

Correct Answer: [None]

Sunday, December 9, 2018 1:36:18 PM CST

← OK