Review Test Submission: CA

User	Richa Singh
Course	(MERGED) ACN 7310.002 - HCS 7310.002 - F18
Test	CA
Started	10/5/18 3:59 PM
Submitted	10/5/18 4:54 PM
Due Date	10/6/18 8:00 PM
Status	Completed
Attempt Score	110 out of 110 points
Time Elapsed	55 minutes
Results Displayed	All Answers, Submitted Answers, Correct Answers

Question 1

10 out of 10 points

$$\mathbf{X} = \begin{bmatrix} 2 & 4 \\ 2 & 1 \\ 6 & 10 \end{bmatrix}; \mathbf{Y} = \begin{bmatrix} 3 & 3 & 4 \\ 4 & 5 & 2 \end{bmatrix}$$

Please create a 3 x 3 matrix from **X** and **Y**?

Selected Answer: **To create a 3x3 matrix we have to multiply X and Y**

XY = [22, 26 ,16 ; 10, 11,10; 58, 68,44]

Correct Answer: **XY**

Question 2

10 out of 10 points

Which of the following tests is most relevant to correspondence analysis?

Selected Answer: b. Chi-square test

Answers:
a. Logistic regression
b. Chi-square test
c. *t*-test
d. Analysis of variance

Question 3

10 out of 10 points

What is true for a symmetric plot?

Selected Answers:
- ✓ a. Both row and column factor scores are normalized.
- ✓ b. You can interpret the distance between two row factor scores in this plot.
- ✗ c. You can interpret the distance between a row and a column factor scores in this plot.
- ✗ d. It is a simplex.
- ✓ e. You can interpret the distance between two column factor scores in this plot.

Answers:
- ✓ a. Both row and column factor scores are normalized.
- ✓ b. You can interpret the distance between two row factor scores in this plot.
- c. You can interpret the distance between a row and a column factor scores in this plot.
- d. It is a simplex.
- ✓ e. You can interpret the distance between two column factor scores in this plot.
- f. Only either row or column factor scores are normalized.

Question 4

10 out of 10 points

$$\mathbf{X} = \begin{bmatrix} 2 & 4 \\ 2 & 1 \\ 6 & 10 \end{bmatrix}; \mathbf{Y} = \begin{bmatrix} 3 & 3 & 4 \\ 4 & 5 & 2 \end{bmatrix}$$

(1) Please compute **XY**.

(2) Please compute **YX**.

Write a matrix in the following format -- e.g. **X** = [2, 4; 2, 1; 6, 10]

Selected Answer: **XY** = [22, 26 ,16 ; 10, 11,10; 58, 68,44]
YX = [36, 55; 30, 41]

Correct Answer:
(1) **XY** = [22, 26, 16; 10, 11, 10; 58, 68, 44]
✓ (2) **YX** = [36, 55; 30, 41]

Question 5

10 out of 10 points

PCA is a special case of GSVD when the masses and weights (the GSVD constraints) are equal to 1.

Selected Answer: ✓ True

Answers:
✓ True
False

Question 6

10 out of 10 points

How do you compute the masses?

Selected Answer: ✓ a. The sums of the rows divided by the total sum of the table.

Answers:
- ✓ a. The sums of the rows divided by the total sum of the table.
- b. The sums of the columns divided by the total sum of the table.
- c. The means of the columns.
- d. The means of the rows.

Question 7

10 out of 10 points

Which of the following are properties of a row profile matrix?

Selected Answers:
- ✓ b. The matrix you get when you divide rows by their sums.
- ✓ d. How each column contributes to a row.
- ✓ e. A matrix with the summation of each row equals 1.

Answers:
- The average row.
- a.
- ✓ b. The matrix you get when you divide rows by their sums.
- c. A matrix with the summation of each column equals 1.
- ✓ d. How each column contributes to a row.
- ✓ e. A matrix with the summation of each row equals 1.

Question 8

10 out of 10 points

Correspondence analysis (CA) is a multivariate analysis that analyzes **[a]** data, which are usually stored as a **[b]** table. To describe how the rows relate to the columns, CA creates **[c]** for both the rows and the columns. In CA, instead of the normal Euclidean distance, the chi-square distance among the data point is computed. Unlike PCA, which uses the SVD, CA uses the **[d]** SVD.

Specified Answer for: a ✗ qualitative/nominal

Specified Answer for: b ✓ contingency

Specified Answer for: c ✓ factor scores

Specified Answer for: d ✓ generalized

Correct Answers for: a		
Evaluation Method	**Correct Answer**	**Case Sensitivity**
✓ *Exact Match*	categorical	
✓ *Exact Match*	qualitative	
✓ *Exact Match*	nominal	
Correct Answers for: b		
Evaluation Method	**Correct Answer**	**Case Sensitivity**
✓ *Exact Match*	contingency	
Correct Answers for: c		
Evaluation Method	**Correct Answer**	**Case Sensitivity**
✓ *Exact Match*	factor scores	

Correct Answers for: d		
Evaluation Method	**Correct Answer**	**Case Sensitivity**
✓ *Exact Match*	generalized	

Question 9

10 out of 10 points

How do you compute the weights?

Selected Answer: ✓ a. The total sum of the table divided by the sums of the columns.

Answers:
- ✓ a. The total sum of the table divided by the sums of the columns.
- b. The means of the columns.
- c. The means of the rows.
- d. The total sum of the table divided by the sums of the rows.

Question 10

10 out of 10 points

What is a non-parametric test?

Selected Answers:
- ✓ a. A test that does not estimate a parameter of the population.
- ✓ c. Monte-Carlo sampling
- ✓ e. Bootstrap

Answers:
- ✓ a. A test that does not estimate a parameter of the population.
- b. A test that estimates a parameter of the population.
- ✓ c. Monte-Carlo sampling
- d. ANOVA
- ✓ e. Bootstrap
- f. *t*-test

Question 11

10 out of 10 points

What is true for an asymmetric plot?

Selected Answers:
- ✓ b. You can interpret the distance between a row and a column factor scores in this plot.
- ✓ c. Either row or column factor scores are normalized.
- ✓ d. It is a simplex.
- ✓ e. You can interpret the distance between two row factor scores in this plot.
- ✓ f. You can interpret the distance between two column factor scores in this plot.

Answers:
- a. Both row and column factor scores are normalized.
- ✓ b. You can interpret the distance between a row and a column factor scores in this plot.

c. Either row or column factor scores are normalized.

d. It is a simplex.

e.
You can interpret the distance between two row factor scores in this plot.

f.
You can interpret the distance between two column factor scores in this plot.

Sunday, December 9, 2018 1:35:39 PM CST

← OK