



Review Test Submission: MCA

User	Richa Singh
Course	(MERGED) ACN 7310.002 - HCS 7310.002 - F18
Test	MCA
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Attempt Score	33.33333 out of 50 points
Time Elapsed	4 hours, 10 minutes
Results Displayed	All Answers, Submitted Answers, Correct Answers

Question 1

10 out of 10 points

To conduct MCA on \mathbf{X} (with $\mathbf{X} = \mathbf{Z} - \mathbf{rc}^T$) is equivalent to

Selected Answers: ☒ b. CA(\mathbf{X})

☒ c. SVD(\mathbf{MXW}), with $\mathbf{M} = \mathbf{D}_r^{-1/2}$ and $\mathbf{W} = \mathbf{D}_c^{-1/2}$

☒ e. GSVD($\mathbf{X}, \mathbf{M}, \mathbf{W}$), with $\mathbf{M} = \mathbf{D}_r^{-1/2}$; $\mathbf{W} = \mathbf{D}_c^{-1/2}$

☒ f. PCA(\mathbf{MXW}), with $\mathbf{M} = \mathbf{D}_r^{-1/2}$ and $\mathbf{W} = \mathbf{D}_c^{-1/2}$

Answers:

a. SVD(\mathbf{X})

☒ b. CA(\mathbf{X})

☒ c. SVD(\mathbf{MXW}), with $\mathbf{M} = \mathbf{D}_r^{-1/2}$ and $\mathbf{W} = \mathbf{D}_c^{-1/2}$

d. PCA(\mathbf{X})

☒ e. GSVD($\mathbf{X}, \mathbf{M}, \mathbf{W}$), with $\mathbf{M} = \mathbf{D}_r^{-1/2}$; $\mathbf{W} = \mathbf{D}_c^{-1/2}$

☒ f. PCA(\mathbf{MXW}), with $\mathbf{M} = \mathbf{D}_r^{-1/2}$ and $\mathbf{W} = \mathbf{D}_c^{-1/2}$

Question 2

0 out of 10 points

What is a Burt matrix?

Selected Answers:

☒ $\mathbf{X}^T\mathbf{X}$, when \mathbf{X} is a contingency table

☒ It is a contingency table

☒ A close friend of the Ernie matrix

Answers:

☒ $\mathbf{X}^T\mathbf{X}$, when \mathbf{X} is an indicator matrix

☒ $\mathbf{X}^T\mathbf{X}$, when \mathbf{X} is a contingency table

☒

$\mathbf{X}^T\mathbf{X}$, when \mathbf{X} has observation on the rows, and levels of variables on the columns

It can only have 1s and 0s

- ✓ It is a contingency table
 - ✓ It is a symmetrical matrix
 - ✓ It includes margins of each level of each variable on diagonal
- It includes margins of each level of each variable off diagonal
- A close friend of the Ernie matrix

Question 3

10 out of 10 points

A data table to be analyzed by MCA

Selected
Answers:

- ✗ a. is geometrically represented as a hypnotoad
- ✓ b.
is arranged with observations on the rows and variables on the columns
- ✗ c. is geometrically represented as a simplex
- ✗ d. is geometrically represented as a hypnocube
- ✓ e. is geometrically represented as a hypercube
- ✓ g. can include only 0s and 1s

Answers:

- a. is geometrically represented as a hypnotoad
- ✓ b.
is arranged with observations on the rows and variables on the columns
- c. is geometrically represented as a simplex
- d. is geometrically represented as a hypnocube
- ✓ e. is geometrically represented as a hypercube
- f. can include only integers
- ✓ g. can include only 0s and 1s

Question 4

10 out of 10 points

MCA can be used to analyze

Selected Answers:

- ✓ a. Nominal variables
- ✓ c. Quantitative variables (after binning them)
- ✓ e. Ordinal variables (after binning them)

Answers:

- ✓ a. Nominal variables
- b. Abominable variables
- ✓ c. Quantitative variables (after binning them)
- d. Quantitative variables
- ✓ e. Ordinal variables (after binning them)




Question 5

3.33333 out of 10 points

Multiple correspondence analysis (MCA) extends **[a]** and **[b]** to analyze the pattern of relationship of multiple categorical variables. The data table that goes into MCA is a(n) **[c]** matrix. In that data table, each **[d]** of each variable is represented as its own column, and coded as a binary variable. This is also called **[e]** coding. MCA and CA computed **[f]** and **[g]** in the same way, and so both rely on the **[h]** distance. MCA is similar to CA in many ways, except that, in MCA, the eigenvalues are **[i]**-estimated.

Specified Answer for: a ✓ PCA

Specified Answer for: b ✗ MCA

Specified Answer for: c  indicatorSpecified Answer for: d  levelsSpecified Answer for: e  dummy/nominalSpecified Answer for: f  row factor scoresSpecified Answer for: g  column factor scoresSpecified Answer for: h  squaredSpecified Answer for: i  over

Correct Answers for: a		
Evaluation Method	Correct Answer	Case Sensitivity
 <i>Exact Match</i>	PCA	
 <i>Exact Match</i>	principal component analysis	
Correct Answers for: b		
Evaluation Method	Correct Answer	Case Sensitivity
 <i>Exact Match</i>	CA	
 <i>Exact Match</i>	correspondence analysis	
Correct Answers for: c		
Evaluation Method	Correct Answer	Case Sensitivity
 <i>Exact Match</i>	indicator	
 <i>Exact Match</i>	group	
Correct Answers for: d		
Evaluation Method	Correct Answer	Case Sensitivity
 <i>Exact Match</i>	level	
Correct Answers for: e		
Evaluation Method	Correct Answer	Case Sensitivity
 <i>Exact Match</i>	disjunctive	
Correct Answers for: f		
Evaluation Method	Correct Answer	Case Sensitivity
 <i>Exact Match</i>	masses	
 <i>Exact Match</i>	mass	
 <i>Exact Match</i>	weights	
 <i>Exact Match</i>	weight	
Correct Answers for: g		
Evaluation Method	Correct Answer	Case Sensitivity
 <i>Exact Match</i>	masses	
 <i>Exact Match</i>	mass	
 <i>Exact Match</i>	weights	
 <i>Exact Match</i>	weight	
Correct Answers for: h		
Evaluation Method	Correct Answer	Case Sensitivity
 <i>Exact Match</i>	chi-square	
Correct Answers for: i		
Evaluation Method	Correct Answer	Case Sensitivity

✔ *Exact Match*

over

Sunday, December 9, 2018 1:36:00 PM CST

← OK