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Time taken	20 mins
Grade	60.00 out of 60.00 (100%)

### Question 1

Correct

4.00 points out of 4.00

According to Professor Sean Smith, how might accountants leverage big data to help combat fraud and possibly fraudulent activities?

Select one or more:

- ☐ a. Try not to consider customer profitability, shopping habits, and shipping locations.
- ☒ b. Take advantage of improved data collection and processing at operational facilities to improve inventory and other asset control. ✓
- ☐ c. Leverage the least frequent and outdated reporting requirements demanded of both organizations and financial professionals
- ☒ d. Leverage the more frequent and real-time reporting requirements demanded of both organizations and financial professionals. ✓

### Question 2

Correct

4.00 points out of 4.00

Which of the following best describes extreme values in the context of anomaly detection?

Select one:

- ☐ a. Data points whose columns have simply been transposed.
- ☐ b. Data that might be obtained by machine.
- ☐ c. Data that might be incorrectly obtained or the result of either human or machine error.
- ☒ d. Data points that follow the expected distributions, but have unusually high scatter. ✓

### Question 3

Correct

4.00 points out of 4.00

Can sophisticated machine learning techniques be used to eliminate majority outlier points?

Select one:

- ☐ a. No
- ☒ b. Yes ✓

**Question 4**

Correct

4.00 points out  
of 4.00

Can transposed data be considered an anomaly?

Select one:

- ☐ a. No
- ☒ b. Yes ✓

**Question 5**

Correct

4.00 points out  
of 4.00

Which of the following will not be considered as an outlier?

Select one:

- ☐ a. Transposed data
- ☐ b. Incorrect measurements
- ☒ c. None of them ✓
- ☐ d. Extreme values

**Question 6**

Correct

4.00 points out  
of 4.00

Are more robust statistical measurements like the median and the trimmed mean and standard deviation less sensitive to outliers than the standard statistical summarizations of the distribution?

Select one:

- ☐ a. No
- ☒ b. Yes ✓

**Question 7**

Correct

4.00 points out  
of 4.00Which of the following is not a parameter of a OneClassSVM estimator in the `svm` module in the scikit learn library?

Select one:

- ☐ a. nu
- ☐ b. kernel
- ☒ c. n\_jobs ✓
- ☐ d. gamma
- ☐ e. degree

**Question 8**

Correct

4.00 points out  
of 4.00

Which of the following methods is not used for primarily identifying data instances that are different from the majority of the data?

Select one:

- ☐ a. Anomaly Detection
- ☐ b. DBSCAN
- ☒ c. Feature engineering ✓
- ☐ d. PCA

**Question 9**

Correct

4.00 points out  
of 4.00

In DBSCAN from sklearn, Which of the following is not a hyperparameter?

Select one:

- ☐ a. metric
- ☒ b. random\_state ✓
- ☐ c. min\_samples
- ☐ d. eps

**Question 10**

Correct

4.00 points out  
of 4.00

What label value is given to points identified as anomalies by the DBSCAN and one-class SVM methods in sklearn?

Select one:

- ☐ a. 1
- ☐ b. 0
- ☐ c. Out
- ☒ d. -1 ✓

**Question 11**

Correct

4.00 points out  
of 4.00

In comparison with DBSCAN, why would using K-means for cluster based anomaly detection be difficult?

Select one:

- ☐ a. K-means is expensive to run
- ☐ b. K-means doesn't use all the data
- ☐ c. K-means uses too much data
- ☒ d. K-means requires specifying the number of clusters ✓

**Question 12**

Correct

4.00 points out  
of 4.00

Which of the following are techniques that can be used for fraud detection aside from statistical techniques and artificial intelligence techniques?

Select one or more:

- ☐ a. Feature selection
- ☒ b. Link analysis ✓
- ☒ c. Decision Theory ✓
- ☒ d. Bayesian networks ✓

**Question 13**

Correct

4.00 points out  
of 4.00

Which of the following best describes chargeback fraud?

Select one:

- ☐ a. Thieves with a list of stolen card numbers essentially "play the slots" by attempting purchase after purchase from an online store with different numbers until they find a card number that succeeds.
- ☐ b. Thieves use stolen card numbers to make fraudulent purchases at other stores.
- ☒ c. Purchases are reported as never delivered and then charged back to the merchant by the credit card company. ✓
- ☐ d. Purchases are reported as delivered and then charged to the merchant by the credit card company

**Question 14**

Correct

4.00 points out  
of 4.00

According to Wikipedia post, Which of the following is not an example of statistical data analysis techniques?

Select one:

- ☐ a. Computing user profiles.
- ☐ b. Time-series analysis of time-dependent data.
- ☐ c. Models and probability distributions of various business activities either in terms of various parameters or probability distributions.
- ☒ d. Expert systems to encode expertise for detecting fraud in the form of rules. ✓
- ☐ e. Clustering and classification to find patterns and associations among groups of data.

**Question 15**

Correct

4.00 points out  
of 4.00

According to Deloitte article, which of the following is not the limitation of traditional fraud prevention activities?

Select one:

- ☒ a. Too much continuous monitoring. ✓
- ☐ b. Outdated technologies and limited data analytics.
- ☐ c. Resource constraints and inefficiencies.
- ☐ d. Inadequate control activities.