

Score for this attempt: **10** out of 10

Submitted Nov 20 at 6:21am

This attempt took 33 minutes.

Question 1**1 / 1 pts**

1. Which of the following scenarios best describes Forecasting?

- ☐ a. A meteorological study of the local environment
- ☐ b. How consistent machines produce the same product
- ☒ c. A prediction of future events used for planning purposes
- ☐ d. Randomly guessing the future

Question 2**1 / 1 pts**

2. In Exponential Smoothing, for high α , there is a lot of reaction to differences. True or False ?

- ☒ a. True
- ☐ b. False

Question 3**1 / 1 pts**

3. Forecasts are almost always wrong, True or False ?

- ☒ True
- ☐ False

Question 4**1 / 1 pts**

4. Data can exhibit multiple patterns. True or False ?

☒ True

☐ False

Use the following for Questions 5-7.

Bobby Dodd works at Football Inc., a seller of high-quality footballs. He is interested in forecasting demand for his footballs that are sold weekly to Ga Tech using exponential smoothing. Assume an initial forecast of 175 and the demand data below:

Week	Demand	Forecast
1	180	175
2	168	
3	159	
4	175	

Question 5**1 / 1 pts**

5. Using Exponential Smoothing and $\alpha = 0.7$, what would be the demand forecast for week 4?

- ☐ a. 178.5
- ☐ b. 167.51
- ☒ c. 162.65
- ☐ d. 175.35

Question 6

1 / 1 pts

6. Using Exponential Smoothing and $\alpha = 0.3$, what would be the demand forecast for week 4?

- ☐ a. 178.53
- ☒ b. 169.47
- ☐ c. 167.51
- ☐ d. 162.65

Question 7

1 / 1 pts

7. Using Mean Absolute Deviation (MAD) as your sole evaluation measurement, which model would you pick and why?

- ☒ a. Pick $\alpha = 0.3$ model. It has a lower MAD

- ☐ b. Pick $\alpha = 0.3$ model. It has a higher MAD
- ☐ c. Pick $\alpha = 0.7$ model. It has a lower MAD
- ☐ d. Pick $\alpha = 0.7$ model. It has a higher MAD

Use the following for Questions 8-9:

Quickest Trippy is a local gas station. They want to predict demand for gasoline and have the following historical data.

Month	Demand (in thousands of gallons)	Forecast
April	12	
May	17	
June	20	
July	19	
August	24	

Question 8

1 / 1 pts

8. Using $\alpha = 0.2$ and $\delta = 0.4$ as well as $F_1=11,000$ and $T_1=2,000$ what would be the Trend Component predicted for week 2 (T_2)?

- ☒ a. 1.92
- ☐ b. 12.8

☐ c. 2.10

☐ d. 15.18

Question 9

1 / 1 pts

9. Using $\alpha = 0.2$ and $\delta = 0.4$ as well as $F_1=11,000$ and $T_1=2,000$ what would be the Forecast Including Trend for week 2 (FIT_2)?

☐ a. 15.18

☐ b. 12.8

☒ c. 14.72

☐ d. 17.28

Question 10

1 / 1 pts

10. Using the following data, what would be the seasonality index for March?

Month	Demand	Month	Demand
January	90	July	105
February	80	August	100
March	85	September	90
April	100	October	80
May	123	November	80

June	115	December	80
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☐ a. 1.17

☐ b. 0.957

☒ c. 0.904

☐ d. 0.851

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