Assignments

Unit 3 - Week 3

Assignment 3

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

1. Which of the following is most appropriate?
   a. Qualitative forecasting is slightly accurate.
   b. Quantitative forecasting is more accurate.
   c. Forecasting always has some errors.
   d. None of the above
   
   Solution: a
   
   Assignment Answer:
   a. Qualitative forecasting is slightly accurate.

2. Which of the following is not correct?
   a. Forecasting accuracy is independent of time length of forecast.
   b. Using the trend approach makes you more accurate compared to other trend forecasts.
   c. Both (a) and (b) are correct.
   d. None of the above
   
   Solution: c
   
   Assignment Answer:
   c. Both (a) and (b) are correct.

3. If in time series data, current deseasonalized demand is 120 units, additive trend is 3 units per month and monthly seasonal factor is 1.20 which is multiplicative seasonal component
   
   Solution: a
   
   Assignment Answer:
   a. multiplication of 3.5, what is the systematic component?

4. If in time series data, current deseasonalized demand is 144 units, multiplicative trend is 1.20 units per month and monthly multiplicative seasonal factor is 1.32, what is the systematic component?
   
   Solution: a
   
   Assignment Answer:
   a. 129.12

5. A restaurant owner monthly demand of mobile phones for past five months as follows:

<table>
<thead>
<tr>
<th>Month</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>120</td>
</tr>
<tr>
<td>February</td>
<td>110</td>
</tr>
<tr>
<td>March</td>
<td>120</td>
</tr>
<tr>
<td>April</td>
<td>120</td>
</tr>
<tr>
<td>May</td>
<td>120</td>
</tr>
</tbody>
</table>

   Using a three period moving average method, the estimate for the forecast for the month of June
   
   Solution: a
   
   Assignment Answer:
   a. 120

6. A manufacturer estimated monthly demand of mobile phones for past five months as follows:

<table>
<thead>
<tr>
<th>Month</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>120</td>
</tr>
<tr>
<td>February</td>
<td>110</td>
</tr>
<tr>
<td>March</td>
<td>120</td>
</tr>
<tr>
<td>April</td>
<td>120</td>
</tr>
<tr>
<td>May</td>
<td>120</td>
</tr>
</tbody>
</table>

   Using a three period moving average method, the estimate for the forecast for the month of June, Pₙ₋₁ = 1.6, Pₙ₋₂ = 1.2, and Pu = 0.25.
   
   Solution: a
   
   Assignment Answer:
   a. 120

7. The trend $\alpha$ in exponential smoothing decreases
   
   Solution: a
   
   Assignment Answer:
   a. Smoothing the fluctuation of trend value

8. The trend of $\alpha$ in exponential smoothing decreases
   
   Solution: a
   
   Assignment Answer:
   a. Smoothing the fluctuation of trend value

9. In forecasting data is available from a forecasting exercise:

<table>
<thead>
<tr>
<th>Period</th>
<th>Actual Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>85</td>
</tr>
<tr>
<td>2</td>
<td>85</td>
</tr>
<tr>
<td>3</td>
<td>85</td>
</tr>
<tr>
<td>4</td>
<td>110</td>
</tr>
<tr>
<td>5</td>
<td>110</td>
</tr>
<tr>
<td>6</td>
<td>100</td>
</tr>
</tbody>
</table>

   The value of $\alpha$ is 0.2
   
   Solution: a
   
   Assignment Answer:
   a. 0.2

10. Which one of the following is the qualitative method of forecasting?
   
   Solution: a
   
   Assignment Answer:
   a. Delphi