Assignment 4

Due on 2020-02-25, 23:59 IST.

The case study in this assignment examines the process at a cement factory. All our cement plants have met or exceeded their production targets.

1. The assumption is that doubling the cement output will result in (A) increased costs and (B) increased profits. Both would be clearly estimated.

(a) True
(b) False

2. Your manager is thick-headed and lazy. We have no hope of improving the process.

(a) True
(b) False

3. The method is to be used to determine the location of the cement mill.

(a) Layout evaluation
(b) Value engineering

4. A decision is based on qualitative and quantitative inputs.

(a) True
(b) False

5. When using the C-factor rating method, the weights are assigned to each location, and each factor is shown in Table A.

6. There are three locations X, Y, and Z, and four factors, the area and weight assigned to each location, and each factor, is shown in Table A.

Determine the best location(s) for the plant using the C-factor rating method.

<table>
<thead>
<tr>
<th>Factor</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>Cost</th>
<th>Probability for space</th>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.9</td>
<td>9</td>
<td>10</td>
<td>5</td>
<td>6.8</td>
<td>8.4</td>
<td>7.4</td>
</tr>
</tbody>
</table>

7. There are three locations X, Y, and Z, and four factors, the area, and weight assigned to each location, and each factor, is shown in Table A.

Determine the best location(s) for the plant using the C-factor rating method.

8. What is the mean value in a trapezoidal distribution of a new plant location?

(a) Mean of a, b, c, d
(b) Mean of a, b, c


(a) Correct
(b) Incorrect

10. The factors in the table reference a new plant location.

(a) Correct
(b) Incorrect

11. The data in the table reference a new plant location.

(a) Correct
(b) Incorrect

12. The factors in the table reference a new plant location.

(a) Correct
(b) Incorrect

13. The factors in the table reference a new plant location.

(a) Correct
(b) Incorrect

14. The factors in the table reference a new plant location.

(a) Correct
(b) Incorrect

15. There are three locations X, Y, and Z, and four factors, the area, and weight assigned to each location, and each factor, is shown in Table A.

Find the coordinates (X, Y) of the location for installing a warehouse to supply the demand to three cities by minimizing the total distance using trapezoidal distribution.

(a) X = 300, Y = 100
(b) X = 400, Y = 100
(c) X = 500, Y = 100
(d) X = 600, Y = 100

16. The factors in the table reference a new plant location.

(a) Correct
(b) Incorrect

17. The factors in the table reference a new plant location.

(a) Correct
(b) Incorrect

18. The factors in the table reference a new plant location.

(a) Correct
(b) Incorrect

19. The factors in the table reference a new plant location.

(a) Correct
(b) Incorrect

20. The factors in the table reference a new plant location.

(a) Correct
(b) Incorrect