Unit 8 - Week 5

Assignment 5

The due date for submitting this assignment has passed. Due on 2020-03-04, 23:59 IST. As per our records you have not submitted this assignment.

Click here for Statistical Tables (https://drive.google.com/open?id=1r1GOf4bgh7rflvu8O5axkLi7GM1tZvGq) are provided

1) When undertaking t-tests on 7 different samples to find out whether these samples have different means at 98% confidence level, the chances of committing Type 1 error are:

- 7.8 %
- 15.9 %
- 40.8 %
- 22.1 %
- 13.2 %

No, the answer is incorrect.
Score: 0
Accepted Answers: 13.2 %

2) For a sample set given below, the $F_{critical}$ values at 95% and 99% confidence levels, respectively, will be:

$F_{critical}$ values at 95% and 99% confidence levels, respectively, will be:
For the sample set given in Question no. 2, the mean square factor and mean square error values (rounded off to whole numbers) are: 1 point

- 123967, 2805
- 298567, 3726
- 126966, 2736
- 8875, 2342
- 98900, 5600

No, the answer is incorrect. Score: 0
Accepted Answers: 126966, 2736

At 99% confidence level, the Least Significant Difference value (rounded off to whole number) 1 point for the sample set given in Question 2 is:

- 770
- 344
- 88
- 77
- 34

No, the answer is incorrect. Score: 0
Accepted Answers: 77

For the data set in Q2, the means of following samples are statistically similar at 99% confidence level: 1 point

- Sample 1 and Sample 3
- Sample 2 and Sample 3
- Sample 2 and Sample 4
- Sample 3 and Sample 5
Sample 1, Sample 3 and Sample 5

No, the answer is incorrect.
Score: 0
Accepted Answers: Sample 2 and Sample 4

Five samples, each containing five readings, were analysed by ANOVA at 95% confidence level. The partial ANOVA table is provided below:

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>A</td>
<td>D</td>
<td>13924</td>
<td>3.61</td>
</tr>
<tr>
<td>Within Groups</td>
<td>B</td>
<td>E</td>
<td>G</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>C</td>
<td>F</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Provide the values for A-G.

6) For the samples being compared in above data, the following statement(s) is/are true:

- [ ] At 95% confidence level, the means of all the samples are similar
- [ ] At 95% confidence level, the means of at least two samples are different
- [ ] At 99% confidence level, the means of all the samples are similar
- [ ] At 99% confidence level, the means of at least two samples are different
- [ ] There is insufficient information to make any inference

No, the answer is incorrect.
Score: 0
Accepted Answers: At 95% confidence level, the means of at least two samples are different At 99% confidence level, the means of all the samples are similar

7) For the samples being compared in above data, the least significant difference value at 95% and 99% confidence level, respectively, are:

- [ ] 88, 120
- [ ] 98, 120
- [ ] 120, 88
- [ ] 75, 98
- [ ] 82, 112

No, the answer is incorrect.
Score: 0
Accepted Answers: 82, 112

8) For two samples having 8 and 10 readings respectively, and standard deviation values of 0.8181 and 0.7172, the $F_{calculated}$ value will be:

- [ ] 1 point
9) For the above data, at 95% and 99% confidence levels, the following holds true: 1 point

- Their precisions are considered statistically similar at both the confidence levels
- Their precisions are considered statistically different at both the confidence levels
- While the precisions are statistically similar at 95% confidence level, they are different at 99% confidence level
- While the precisions are statistically different at 95% confidence level, they are similar at 99% confidence level
- We need more information to provide any inference

No, the answer is incorrect.
Score: 0
Accepted Answers:
*Their precisions are considered statistically similar at both the confidence levels*