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Ex. No.	Experiment Name	Page No.
01.	Find out the point estimate of the population mean and interval estimate of the population mean. Where 30 students quiz test marks is (2, 4, 3, 23, 25, 27, 28, 13, 15, 16, 20, 14, 35, 33, 32, 21, 35, 40, 42, 22, 33, 13, 17, 20, 25, 29, 27, 40, 38, 31). Total marks 50. Here population size N=30 and sample size n=10. Also illustrate the sample size determination, sampling distribution for mean and check the unbiasness of the population mean.	01-05
02.	Two dice rolled, S is the sum of both faces, Find the expectation of S, E(s) and variance of S, V(s). Plot the distribution of S and dice D.	06-08
03.	A herd of 1500 steer was fed a special high protein gain for a month. A random sample of 29 was weighted and had gained an average of 6.7 pounds. If the sd of weight gain for the entire herd is 7.1. Test the hypothesis at 5% level of significance that the average weight gain per steer for the month was more than 5 pounds. Also comments on the test using the p-value. Create the confidence interval.	09-11
04.	In order to find out whether children with chronic diarrhea have the same average hemoglobin level (Hb) that is normally seen in healthy children in the same area, a random sample of 10 children with chronic diarrhea are selected, and their Hb levels (<g/dl) are obtained as follows: 12.3, 11.4, 14.2, 15.3, 14.8, 13.8, 11.1, 15.1, 15.8, 13.2 Do the data provide sufficient evidence to indicate that the mean Hb level for children with chronic diarrhea is less than the normal value of 14.6 (g/dl)? Test at 0.01 level of significance. Draw a boxplot and normal plot for this data and comments.	12-15
05.	In order to find out whether children with chronic diarrhea have the same average hemoglobin level (Hb) that is normally seen in healthy children in the same area, a random sample of 10 children with chronic diarrhea are selected, and their Hb levels (<g/dl) are obtained as follows: 12.3, 11.4,14,2, 15.3, 14.8, 13.8, 11.1,15.1,15.8,13.2 another random sample of 12 children with chronic diarrhea are 11.1, 17.2, 13.4, 15.2, 14.1, 13.0, 12.5, 11.5, 12.7, 14.5, 15.3, 14.0. Is there any difference in the mean Hb label between the two groups of children???	16-19

<table>
<tr>
<td>06.</td>
<td>Test the hypothesis that the mean systolic blood pressure of healthy subjects (status-0) and subject with hypertension (status-1) are equal, have do= 0. The dataset contains n1= 25 subjects with status-0 and n2= 30 with status-1.

Status-0: (120, 115, 94, 118, 111, 102, 102, 131, 104, 107, 115, 139, 115, 113, 114, 105, 115, 134, 109, 109, 93, 118, 109, 106, 125).

Status-1: (150, 142, 119, 127, 141, 149, 144, 142, 149, 161, 143, 140, 148, 149, 141, 146, 159, 152, 135, 134, 161, 130, 125, 141, 148, 153, 145, 137, 147, 169).</td>
<td>20-24</td>
</tr>
<tr>
<td>07.</td>
<td>The 126 people have some doing smoking and some do not smoke. Some of this type of data are tabulated is given below:
<table>
<tr><th>Disses
Smoking</th><th>Heart Disses</th><th>Not Heart</th><th>Disses Total</th></tr>
<tr><td>YES</td><td>55</td><td>16</td><td>71</td></tr>
<tr><td>NO</td><td>23</td><td>32</td><td>55</td></tr>
<tr><td>Total</td><td>78</td><td>48</td><td>N=126</td></tr>
</table>
Is there any association between smoking and heart disses for the given data?</td>
<td>25-27</td>
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<td>08.</td>
<td>There are two COVID-19 testing booths, we test some people and their recorded data is below, where the numbers of people of booth-1 are 11 and the numbers of people of booth-2 are 10:

Booth-1: positive, positive, negative, positive, negative, negative, positive, positive, positive, negative, positive.

Both-2: negative, negative, negative, positive, positive, negative, positive, negative, negative, negative.

Is there any relation between two both???</td>
<td>28-31</td>
</tr>
</table>

09.	The number of systolic blood pressure of healthy subjects. The dataset contains n = 25 that are (120, 115, 94, 118, 111, 102, 102, 131, 104, 107, 115, 139, 115, 113, 114, 105, 115, 134, 109, 109, 93, 118, 109, 106, 125). Do you think that the sample follows N(μ,100)?	32-33
10.	The systolic blood pressure of healthy subjects (status-0) and subject with hypertension (status-1) are equal have d0 = 0. The dataset contains n1 = 25 subjects with staus-0 and n2 = 30 with status-1. **Status-0:** (120, 115, 94, 118, 111, 102, 102, 131, 104, 107, 115, 139, 115, 113, 114, 105, 115, 134, 109, 109, 93, 118, 109, 106, 125). **Status-1:** (150, 142, 119, 127, 141, 149, 144, 142, 149, 161, 143, 140, 148, 149, 141, 146, 159, 152, 135, 134, 161, 130, 125, 141, 148, 153, 145, 137, 147, 169). Are the variations is systolic blood pressure of healthy subjects and subject with hypertension are same?	34-35
11.	The sample observations are- X: 122, 145, 120, 45, 98, 67,109, 100, 107, 106, 93, 125, 130, 90, 34, 108, 80, 48, 65, 56. The test hypothesis at 5% level of significance that the test of median. Do you think that the median is 110?	36-37
12.	Test the hypothesis that the median systolic blood pressure of healthy subjects (status-0) and subject with hypertension (status-1) are equal, have do= 0. The dataset contains n1= 25 subjects with status-0 and n2= 30 with status-1. **Status-0:** (120, 115, 94, 118, 111, 102, 102, 131, 104, 107, 115, 139, 115, 113, 114, 105, 115, 134, 109, 109, 93, 118, 109, 106, 125). **Status-1:** (150, 142, 119, 127, 141, 149, 144, 142, 149, 161, 143, 140, 148, 149, 141, 146, 159, 152, 135, 134, 161, 130, 125, 141, 148, 153, 145, 137, 147, 169). Is there any difference in the median between status-0 and status-1?	38-39