1. Test whether there is any significant difference between the variances of the population from Which the following samples are taken:

Sample I	20	16	26	27	23	22	
Sample II	27	33	42	35	32	34	38

2. The following data gives the number of aircraft accidents that occurred during the various days of a week. Find whether the accidents are uniformly distributed over the week.

Days	Sun	Mon	Tue	Wed	Thu	Fri	Sat
No. of Accidents	14	16	8	12	11	9	14

3. The theory predicts that the population of beans in the four groups A, B, C and D should be 9:3:3:1. In an experiment among 1600 beans, the number in the four groups was 882,313,287 and 118. Do the experimental results support the survey?

4. A study was conducted to test whether gender and preference for a product are independent. The following data was collected:

Gender	Prefer Product A	Prefer Product B	Prefer Product C	Total
Male	30	40	50	120
Female	20	60	40	120
Total	50	100	90	240

Perform a Chi-square test to determine whether gender and product preference are independent at a 5% significance level.

5. A survey was conducted among students to check whether their study habits are independent of their academic performance. The following data was obtained:

Study Hours	High Performance	Low Performance	Total
> 4 hours	50	20	70
< 4 hours	30	40	70
Total	80	60	140

6. The following gives the classification of 100 workers according to gender and nature of work. Test whether the nature of work independent of gender and the worker.

	Stable	Unstable
Male	40	20
Female	10	30

7. On the basis of information given below about the treatment of 200 patients suffering from a disease, state whether the new treatment is comparatively superior to the conventional treatment

	Favourable	Not Favourable
New	60	30
Conventional	40	70