F- Test

Two random samples were drawn from two normal populations and their values are: A: 16, 17, 25, 26, 32, 34, 38, 40, 42
B: 14, 16, 24, 28, 32, 35, 37, 42, 43, 45, 47
Test whether the two populations have the same variance at a 5% level of significance.

Question 2: In a sample of 9 observations, the sum of the squared deviation of items from the mean was 64. In another sample of 11 observations, the value was found to be 88. Test whether the difference is significant at the 5% level.

Question 3: Research was conducted to understand whether women have a greater variation in attitude on the political issue than men. Two independent samples of 31 men and 61 women were used for the study. The sample variances calculated were 130 for women and 70 for men. Test whether the difference in attitude towards political issues is significant at a 5% level of significance.

Chi-Square Test

Question No. 01: In an Antimalarial campaign in America, Quinine was administered to 500 persons out of a total population of 2000. The no. of fever and no fever cases are shown below:

Treatment	Fever	No Fever	Total
Quinine	20	480	500
No Quinine	100	1400	1500
Total	120	1880	2000

Discuss the usefulness of Quinine in checking malaria.

Question No. 02: A drug X claimed to be effective in curing colds. In an experiment on 500 persons with cold, half of them were given the drug X and half were given Drug Y. The patient's reactions to the treatment are recorded in the following table:

Treatment	Cured	Reaction	Not Cured	Total
Drug X	150	30	70	250
Drug Y	130	40	80	250
Total	280	70	150	500

On the basis of the data, can it be concluded that there is a significant difference in the effect of drug X and drug Y?

One-way ANOVA Test

Q. 1: To assess the significance of possible variation in performance in a certain test between the government schools of a city, a common test was given to a number of students taken at random from the fifth class of the 3 schools concerned. the results are given below:

A	B	C
9	13	14
11	12	13
13	10	17
9	15	7
8	5	9

Make the analysis of variance for the given data.